



THE ATOMIC BOMB THAT ENDED THE WAR

wiped out the city of Nagasaki, and blasted the basis of our former World Order of existence. The second atomic bomb attack, August 9. The smoke did not even begin to billow out till it passed through cloud layers at 20,000 feet. (Acme—U.S.A.A.F.)

THE NEW INTERNATIONAL Year Book

A COMPENDIUM OF
THE WORLD'S PROGRESS
FOR THE YEAR
1945

EDITOR

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FOREWORD

Once again this YEAR BOOK carries the record of all important events throughout the world of the year just finished—a complete record, from January 1st to December 31st. But, whereas the volumes for the years of war, through military strictures, were necessarily silent on some matters of the highest strategic importance, the present record is able to lift the veil and to disclose vital happenings during those years that reached their climax in 1945. Thus, both as a chronicle of the closing victorious days of the most devastating war in all history, and as a final summary of political, military, scientific, and technological activities which combined to achieve that victory, this present YEAR BOOK is the most important of its long line.

In accordance with past practice, the Editors have consistently sought the most informed authorities to contribute to these pages. Space does not permit a listing here even of the many whose names have been added to the notable list of previous volumes. In their respective fields these names are familiar. Many of the contributors, those of longer standing as well as later ones, are men or women of national and international reputation. The Editors are gratified to be able to present their well-informed summations of the events and developments of 1945.

A feature in this volume that will be welcomed by many consultants of previous volumes in the series is the Index. This replaces the older system of extensive cross references. The Editors ask the indulgence of those consultants who preferred the strictly alphabetical scheme made possible by cross references, but rising costs of production have necessitated a less involved method of printing.

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GLOSSARY

OF IMPORTANT NEW WORDS AND WORDS IN THE NEWS

Compiled by HAROLD WARD

- actin.** A protein which, in conjunction with another protein, myosin, is active in the phenomenon of muscle contraction.
- aerogeology.** The investigation of geological formations by means of aerial photography: used especially in the location of rock structures indicating the existence of new oil or ore deposits.
- airbrasive.** A dental method for grinding down the hard material of teeth by a finely powdered abrasive directed against the surface under air pressure.
- amigen.** A predigested protein obtained from the pancreas of the hog: used in the treatment of severe malnutrition, extensive burns, and for the relief of pain from stomach ulcers.
- ANRAC.** A contraction of Aids Navigation Radio Control, a method of controlling the operation of buoys, lighthouses, foghorns, and other navigation aids by means of coded radio signals.
- ANTU.** A contraction of alpha-naphthyl thiourea: a powerful rat poison recently developed in the U.S.
- aquiculture.** The raising of fish in farm ponds, using selected plant and other food.
- ARO.** Airborne Range Only: describing radar equipment for use with gun range-computers.
- "A" scope.** Radar data indicating only the distance to a target.
- Ascecal.** Assemblée de Constructeurs pour un Renouveau Architectural: a French organization for the promotion of broad public interest in all phases of postwar city planning.
- ASV.** Airborne Surface Vessel: radar equipment for locating surface ships, including submarines coming to the surface.
- Atcorob.** A device for the rapid and accurate reproduction of earth features in three-dimensional models. Name a contraction of the names of the three inventors: Major Atwood, Prof. H. L. Cooke of Princeton University, and Capt. A. H. Robinson, of the Office of Strategic Services. Compare *Orthojector*.
- axon bomb.** A 1,000-pound demolition bomb equipped with a radio device permitting remote control.
- BABS.** Blind Approach Beacon System: a method for directing aircraft to a landing field by radar.
- bactracin.** An antibacterial substance isolated from certain bacilli by American biochemists.
- bake bomb.** Name given by U.S. Marines to a Japanese rocket-propelled bomb guided to the target by a pilot who is locked in the cockpit.
- BAL.** Contraction of British anti-lewisite: a special alcohol developed by R. A. Peters, a British chemist. It is highly effective against arsenic poisoning and has been used also as an antidote against mercury.
- Benadryl.** Trade name for a synthetic drug having value in the relief of hayfever and hives.
- Biber.** The Beaver: a German one-man midget submarine.
- blip.** R.A.F. slang for radar signals caught on a cathode-ray tube.
- bobbing.** The fluctuation of radar echoes due to the alternate interference and reinforcement of the reflected waves.
- bonzo.** See *proximity fuze*.
- BRL.** Barge, Refrigerated, Large: an auxiliary vessel of the U.S. Navy designed to carry 64 carloads.
- "B" scope.** Radar data providing both the range and azimuth of the target.
- calutron.** An electromagnetic device for the separation of isotopes; developed in the production of U-235. Name a contraction of California University cyclotron.
- carbon 13.** A heavy isotope of carbon; chemically indistinguishable from ordinary carbon, its use as a tracer element will permit close study of many physiological processes.
- chemotronics.** A field of research which combines the fundamental knowledge of electronics, superconics, and chemistry, with special emphasis on the development of new industrial products.
- conun.** In full, conundrum: one of the huge floating drums, on which were wound the 500 miles of oil pipelines laid across the English Channel in Operation Pluto.
- "C" scope.** Radar data giving the elevation angle and the azimuth of the target.
- clutter.** A distorted radar image caused by jamming, noise, or continuous echo.
- CRT.** Cathode-ray Tube: the oscilloscope indicator tube used in radar. Also called *scope*.
- cyclops camera.** A miniature camera attached to the center of the forehead for the instantaneous photographing of any scene viewed through a focussing element set in one lens of a pair of spectacles.
- DD.** Dichloropropane dichloropropylene, an insecticide related to DDT, especially effective against wireworms and the hard-shelled larvae of click beetles.
- DD tank.** The Duplex-Drive military tank, developed in 1941 by the British inventor, Nicholas Strausler. A collapsible canvas screen, when inflated, completely surrounds the tank above the tracks, thus enabling it to float.
- discography.** An annotated list of phonograph records.
- DSM Project.** Development of Substitute Materials Project, charged with executing the secret work on atomic bombs directed by the Manhattan District of the U.S. Army Corps of Engineers.
- Eniac.** An electronically operated computing machine designed to solve very complex mathematical problems at high speed. Invented and built by Dr. John W. Mauchly and J. Presper Eckert, Jr. The name is from the initials of the words "electronic numerical integrator and computer."
- Eureka.** A lightweight, battery-operated radar beacon device designed for use by paratroopers.
- faceometer.** An instrument for measuring the principal dimensions and physical characteristics of the

- face:** used by the U.S. Chemical Warfare Service to determine different styles and sizes for gas masks.
- fagarine.** A new drug developed by Argentine scientists as a possible substitute for quinidine in the treatment of certain heart diseases. It is extracted from the leaves and twigs of a tree, *Zanthoxylum fagara*, growing in Argentina.
- Fastax.** Trade name for a series of high-speed motion picture cameras which can take up to 8,000 pictures per second.
- Ferret.** An airplane specially equipped with electronic devices for detecting enemy radar and radio installations.
- Fido.** A British World War II device for the dispersal of fog above airfields by the heat from a system of oil-burning jets arranged along the runways and operated from a central control board. The name is a contraction of Fog, Intensive Dispersal Of (sometimes, Fog Investigation and Dispersal).
- Fireball.** A single-seat, low-winged, fighter airplane which combines propellers with jet propulsion; developed for the U.S. Navy but never used in actual combat.
- Fortical.** Trade name for a tough, durable, lightweight plastic made from cellulose and propionic acid.
- frog men.** Men specially trained in underwater demolition work for the Allies in World War II; they wore rubberized diving suits with broad, paddle-shaped feet, helmets, and oxygen respirators to permit long submersions over large areas.
- gadol.** Vitamin A as extracted from codfish; name derived from *gadus*, scientific name of the codfish, and proposed by American biochemists in distinction from its twin form, galol.
- galol.** A new form of Vitamin A isolated from shark liver by American biochemists and so named to distinguish it from gadol, the usual form. Derived from *galeos*, Greek word for shark.
- GCA.** Ground Controlled Approach: radar landing equipment operated from the ground.
- GCI.** Ground Controlled Interception: ground-operated radar equipment for signalling the position of enemy aircraft to fighter planes.
- gee.** A system for the accurate navigation of aircraft by means of radio signals transmitted from a network of ground stations. First developed by a British inventor, R. J. Dippy, and independently in the U.S. under the name *loran*.
- genocide.** The deliberate extermination of racial or national groups; used by the War Crimes Commission in London in connection with the trials of Nazi war criminals.
- geoscience.** The earth sciences, considered collectively, including topography, mapmaking, etc.
- Guidex.** Trade name for an indexing system which is printed on the extended foredge of a book; designed by H. E. Oppenheimer and adapted especially for dictionaries, directories, and the like.
- Gumbatsu.** The military aristocracy of Imperial Japan.
- Hais cable.** The flexible 2-inch oil pipeline constructed on the principle of the cable and used by the British in the preliminary work connected with Operation Pluto. The name is a contraction of Hartley, Anglo-Iranian, Siemens.
- Hamel pipe.** The 3-inch oil pipeline which was laid across the English Channel immediately after D-day, in connection with Operation Pluto. The name is a contraction of Messrs. H. J. Hammick and B. J. Ellis, the British oil engineers who designed the pipe.
- huff-duff.** An electronic device for intercepting radio signals within a wide radius and accurately locating their point of origin by means of indications on a cathode-ray tube. It operates from a series of interconnected ground and ship stations, and was developed in the United States as a countermeasure against Axis submarines.
- hypholin.** A substance of undetermined medical value isolated by British workers from the same mold fungus that yields penicillin.
- IFF.** Identification, Friend or Foe: any of variously designed and operated systems using radar for the identification of ships and aircraft. See also *racon*.
- Illinois virus.** A virus resembling that which causes parrot fever and believed to be responsible for a type of pneumonia; discovered by Drs. J. Zichis and H. J. Shaughnessy, of the Illinois State Health Department.
- interrogator.** The radar transmitter used in IFF system to challenge suspected ships or aircraft.
- IRIS.** Interim Research and Intelligence Service: succeeding the Office of Strategic Services (OSS).
- isotron.** An apparatus designed for the electromagnetic separation of uranium isotopes during the process of making atomic bombs. Method suggested by R. R. Wilson, of Princeton University, who also coined the purposely meaningless name.
- Kambatsu.** The bureaucratic governmental clique of Imperial Japan.
- Kimpai.** The secret military police of Imperial Japan, similar to the Nazi Gestapo.
- kith.** A sociopolitical group smaller than a race and considered as a basic unit in human civilization. It is relatively homogeneous in culture and language, practises intermarriage, and is assumed to possess ethnic superiority by virtue of its biological inheritance. Term used by Ellsworth Huntington.
- Kolkhozniisa.** A new type of portable water turbine having a capacity of 20 to 60 kilowatts; designed and made in the U.S.S.R. as a general purpose turbine wherever water power is available.
- Kyodo.** A proposed Japanese news agency, modelled after the Associated Press and intended to replace the dissolved Domei service.
- LAB.** Low Altitude Bombsight, a device for connecting the bombsight to the radar unit in order to increase bombing accuracy at low altitudes. Developed for the U.S. Army by the National Defense Research Committee.
- lily.** A floating airstrip or airfield consisting of a series of hexagonal buoyancy drums laid upon the surface of the ocean and hinged together to provide a strong yet flexible support for aircraft.
- Littlejohn.** A device for increasing the effectiveness of anti-tank guns; the name conceals that of the Czech gun designer, Charles Janacek, who developed his invention in England. Also called Littlejohn conversion.
- loran.** A navigation system by which ships and aircraft are enabled accurately to determine their position by interpreting radar and radio signals transmitted irrespective of weather conditions from a network of ground stations. Name a contraction of *Long Range Navigation*.
- macrokith.** A sociopolitical group based upon and developed from a kith but incorporating various elements that give it a mixed or heterogeneous character, as the English, Prussians, Italians, etc.
- Manhattan District.** A division of the Corps of Engineers of the U.S. Army, established Aug. 13,

- 1942, to supervise all the activities connected with atomic bombs. See *DSM*.
- memex.** A mechanized apparatus for the storage of books, records, documents, etc., so classified and arranged as to permit quick consultation of any desired items by the manipulation of a system of controls connected with viewing screens.
- microkith.** A group developed from a kith by prolonged selective inbreeding; it is characterized by relatively small numbers exhibiting a high degree of cultural homogeneity, and it usually occupies a dominant sociopolitical position within a given society.
- Mombatsu.** The landed aristocracy of Imperial Japan.
- monocerin.** A new drug regarded as promising in the treatment of wounds and malaria; developed by Australian scientists at Sydney University.
- moonlight slaughterer.** An unregistered and illegal slaughterer who violates health regulations in the preparation of meat for the black market. Also called apple-tree slaughterer.
- motorjet.** A reciprocating engine combined with a ducted fan.
- Mulberry dock or harbor.** An artificial dock constructed of heavy concrete caissons acting as breakwaters, and equipped with floating piers for loading and unloading ships. Developed by the British in World War II and highly adaptable for use where there are no natural harbors.
- navar.** A method of improving the efficiency and safety of commercial aviation by an interlocking system of radar beacons operating from ground stations and connecting with receivers in aircraft. Developed by Henry Busignies of the International Telephone & Telegraph Corp. Compare *IFF* and *racon*.
- naviglobe.** A system of long-range radio beacons for the improvement of air navigation in all parts of the world. Compare *IFF* and *racon*.
- Navtechjap.** Contraction of United States Naval Technical Mission in Japan, operating to disclose Japanese naval secrets.
- neptunium.** An artificial element of atomic number 93, produced by the fission of the uranium isotope 235 and giving rise to plutonium by emission of a beta particle.
- Norelac.** A liquid plastic regarded as a useful substitute for shellac, especially in the coating of smoked-paper records, such as those made by a kymograph. Name a contraction of Northern Regional [Research Laboratory] lacquer.
- nucleonics.** Nuclear physics: that branch of atomic physics which investigates the structure, properties, and phenomena of the nucleus, especially in relation to the development of atomic energy.
- Oligopoly.** A monopoly, highly centralized in its management and operation through effective control by a very few acting primarily in their own interests.
- ORG.** Operations Research Group; a carefully selected body of scientists, technicians, and specialists in many fields, working in strict secrecy for the U.S. Navy on a wide range of wartime problems.
- Orthicon.** Trade name for an extremely sensitive television camera tube which uses low-velocity electrons in scanning and can pick up scenes under all lighting conditions or by infra-red radiations. Also Orthiconoscope, Image Orthicon.
- Orthoprojector.** A device for accurately projecting onto a relief model all the features shown on a map or photo transparency: designed and constructed by the inventor of the *atcorob*.
- Ortho-Rater.** Trade name for a high-precision optical device for correlating visual ability with various types of manual and mental work.
- paludrine.** An antimalarial synthesized from coal tar by British workers and regarded as more effective than atabrine.
- Penetron.** Trade name for an instrument in which radium is used to determine the thickness of metal plates by the amount and intensity of the back scattering from the penetrating gamma rays.
- Perbunan.** Trade name for an oil-resistant synthetic rubber which retains its flexibility at very low temperatures and can be made self-sealing against punctures, bullet-holes, etc. A member of the Buna-N group of synthetic rubbers.
- periston.** A synthetic chemical, polyvinyl pyrrolidone, used by the Germans in World War II as a substitute for blood plasma in the treatment of shocks; rejected by American medical scientists.
- Plesiothropus.** An extinct animal regarded as intermediate between man and ape; it is represented by skull fragments, brain cast, and a few teeth discovered near Johannesburg, South Africa, by Dr. Robert Broom.
- Plexon.** Trade name for a plastic-coated yarn developed in the United States by two French chemists. The yarn may be of rayon, cotton, or Fiberglas, and the coating of plastic makes it waterproof, rustproof, immune to temperature extremes, and resistant to mild acids or alkalis.
- Pluto.** Contraction of Pipeline Under The Ocean—also called Operation Pluto. The oil pipelines laid by the British across the English channel to ensure a continuous supply of oil to the Allies after D-day.
- plutonium.** An artificial element of atomic number 94, produced from uranium by the disintegration of neptunium.
- polytron.** A hypothetical, short-lived atomic particle regarded as a combination of the electron and the positron; its existence was suggested by Prof. J. A. Wheeler, of Princeton University. Alternative names are *electromeson* and *polyelectron*.
- PPI.** Plan Position Indicator: an apparatus for determining the direction and range of a target by causing radar echoes to indicate its position on the face of a cathode ray tube.
- Precepitron.** Trade name of an electronic filter for removing dust, pollen, and other impurities from air, rugs, fur, etc.; developed by G. W. Penney of the Westinghouse Co.
- Pressuregraph.** Trade name for an electronic device that records on a cathode-ray oscillograph the pressure-time curve of any enclosed pressure system, or an internal combustion engine.
- Promin.** A chemical reported by the U.S. Public Health Service in the treatment of leprosy. It is distantly related to the sulfa drugs and was first discovered in 1938 by Drs. Louis Bambas and Leon Sweet of the Parke-Davis Co.
- proximity fuze.** A complete miniature radio set placed in the nose of a projectile and capable of detonating the charge by simple proximity to the target. Developed since 1940 by the Office of Scientific Research and Development. Known as the *VT fuze*, and in England as *bonzo*.
- pulse-position modulation.** A type of frequency modulation (FM) in which impulses of very short wavelength and great stability are transmitted between stations spaced at varying distances. Now being adapted to the radio transmission of multiple telephone, telegraph, teletype, or similar communications over a network of channels connecting the wired portion of the system.

pulsejet. An engine operating by means of an intermittent jet.

recon. Contraction of radar beacon: a World War II device for the immediate identification of friendly or hostile aircraft by means of radar signals automatically transmitted in code. Also adapted to the safe navigation of ships and aircraft. Compare *IFF*.

radome. The housing which encloses the scanning unit of a radar set.

ramjet. An engine operating by a continuous jet, with compression of a hydraulic ram.

RAPWI. Recovery of Allied Prisoners of War and Internees: an organization operating in former Japanese-held territory.

rasen. A method of obtaining and recording weather information at high altitudes by combining a radiosonde with automatic signal recording devices and ground radio-direction finders. Developed by U.S. Weather Bureau. Name a contraction of "Radiosonde and Radio Winds Aloft Observation," sometimes called *rawinsonde*.

rawinsonde. See *rasen*.

Rebecca. An airborne radar device operating in conjunction with ground equipment to obtain range and azimuth data on the beacon.

Redux. Trade name for a strong, durable adhesive consisting of a liquid resin spread over the surface and sprinkled with a powder, heat being applied to ensure bonding.

reslooming. A method of strengthening and protecting textile fabrics by impregnating them with a chemical that is resistant to water, heat, and injurious chemical action.

resatron. A special vacuum tube having a wide frequency range and modulation output, designed in the U.S. for use with the powerful radar-jamming station located in England. See *RUSA*.

responder. A radar receiver for intercepting signals transmitted in reply to a challenge sent out by the interrogator.

Rotascope. Trade name for an optical device which permits the continuous study of a rotating object at any given point in its path of travel.

SALP. Contraction of sodium-antimony-lactophenate: a liquid insecticide regarded as effective against chewing insects.

schmorkel. German device for enabling submarines to remain submerged without cutting diesel engine. An air Mast (See *YEAR BOOK*, 1944, p. 729).

scope. A cathode-ray tube indicator, as used in radar.

Seehund. The Seal, a small German two-man submarine, about 40 feet long, having a surface speed of 8 knots and armed with two electric torpedoes.

servomechanism. Any of various automatic control devices.

shoran. Contraction of short-range, an air navigation system using radar in connection with ground stations located within a 250-mile radius.

sigmatron. An atom-smashing machine which consists of a cyclotron and a betatron operating in tandem to produce X-rays with a potential of one billion volts. Developed by Dr. E. E. Charlton of the General Electric Laboratories.

Slobok. A cultivated variety of lettuce claimed not to go to seed in warm weather.

SN 7618. A synthetic chemical regarded as better than atabrine and quinine in the treatment of malaria. First developed by German chemists, but its anti-malarial value recognized by American chemists.

snowmobile. A motor vehicle running on wide caterpillar treads and especially designed for travel

across snow and ice. Based on the U.S. Army amphibious vehicle the water weasel and used in Canada.

sofar. A system for locating stranded ships or aircraft by means of underwater sound waves, set up by high explosive depth charges released by the survivors, and detected by hydrophones on widely separated shore stations. Developed by the U.S. Navy and the Woods Hole Oceanographic Institution. Name from the initials of Sound Fixing and Ranging.

Sommerfeld track. A portable road or runway invented by K. J. Sommerfeld, an Englishman and widely used by the allies in World War II. It is composed of uniform lengths of wire netting reinforced with steel rods having loops at the ends, and a completed section can support the heaviest traffic over rough, muddy, or marshy ground.

Stabinal. Trade name for a pine resin mixed with Portland cement and applied to dirt surfaces to prevent mud formation by waterproofing the soil.

stereophon. A method for recording the range and intensity of sound on a track having a total width of 2.65 millimeters.

Stratovision. Trade name for a method of long-range television by relaying the initial ground transmission from aircraft cruising at a height of about six miles. Each air station would have a range of about 200 miles.

streptomycin. A substance found in a mold-like organism (*Streptomyces griseus*) and regarded as a promising antibacterial drug, especially in the treatment of typhoid and certain other diseases immune to penicillin.

Swiss roll. A floating pier or runway consisting of a roll of flexible canvas with wooden cross-pieces. Laid upon the surface of a body of water, it will bear the weight of heavy traffic by increasing the normal surface tension of water. Invented by an Englishman, R. M. Hamilton. Compare *L.L.V.*

syton. See *reslooming*.

transponder. The element in the *IFF* radar system which receives the challenge transmitted from a beacon and automatically sends a reply.

Tridione. Trade name for a synthetic drug reported to give encouraging results in the treatment of petit mal epilepsy, according to Dr. Wm. G. Lennox, of the Harvard Medical School.

tuba. A very high power, land-based radar transmitter developed by Britain and the U.S. as a counter measure against German radar signals.

turbopan. A gas turbine combined with a ducted fan.

turbopjet. A gas turbine connecting with a jet.

turboprop. A gas turbine connecting with a propeller.

tympanometer. An electronic instrument for automatically indicating physiological accommodation to changes in air pressure as shown by the act of swallowing. It consists of two earpieces equipped with diaphragms which respond to and transmit the vibration impinging on the eardrum (tympanum) each time the subject swallows.

USAT. United States Army Thickener: jellied gasoline, used in incendiary bombs. Developed by Louis F. Fieser, American chemist.

VHF. Very High Frequency: applied to very powerful and penetrating radar waves.

VI fuze. Variable time fuze. See *proximity fuze*.

vocoder. A combination microphone and typewriter by means of which spoken words may be automatically converted into typed words; under development by Bell Telephone Laboratories.

MEMORABLE DATES OF 1945

- Jan. 1.** France formally joined the United Nations. U.S. armed forces announced as totalling 11,900,000. Census Bureau reported 155,000 separate governmental bodies functioning in U.S. War Production Board reported 96,869 planes produced in 1944.
- Jan. 3.** Premier Koiso told Japan "the losses sustained by our Navy (in 1944) were by no means small."
- Jan. 9.** U.S. Sixth Army landed successfully on Luzon. Army transport flew from Seattle to Washington, D.C. in 6 hours and 9 minutes.
- Jan. 11.** Greek Elia and British Army signed truce ending civil war that began in early December.
- Jan. 17.** First White Russian army captured Warsaw, 5 years and 4 months after it fell to the Germans.
- Jan. 24.** German army, retreating from the Belgian salient, lost 5,500 vehicles, and 127 tanks and armored cars in two days' battering by U.S. planes.
- Feb. 5.** Gen. MacArthur announced capture of Manila.
- Feb. 12.** Officially announced that Roosevelt, Stalin and Churchill signed a number of basic agreements at Yalta. U.S. federal tax yield in 1944, \$42,125,986,550.
- Feb. 13.** Soviet troops captured Budapest.
- Feb. 20.** Lend-Lease to Allies, \$35,382,000,000, and rumors of shortages caused by this "greatly over-stated in false rumors," said FEA.
- Feb. 27.** Civil government of Philippines turned over to President Osmena.
- Feb. 28.** Army Air Forces announced their first jet-propelled plane, the P-80 Shooting Star. President Vargas announced Brazil's forthcoming first election in 15 years.
- Mar. 1.** Generalissimo Chiang announced a coming national constitutional assembly in which all parties would have equal status.
- Mar. 3.** Nineteen Pan-American nations approved the Act of Chapultepec.
- Mar. 3.** Red Army reached Baltic, splitting Germany.
- Mar. 4.** Saudi Arabia became 45th member of U.N.O.
- Mar. 5.** American 1st Army crossed Rhine at Remagen. Chinese troops take Lashio in Burma.
- Mar. 12.** Four major Hollywood studios shut down by strike of 15,000 AFL workers.
- Mar. 13.** Queen Wilhelmina returns to The Netherlands after 5 years' absence.
- Mar. 17.** Conquest of Iwo Island completed. U.S. individuals held in cash and deposits and Government bonds 148 billion dollars.
- Mar. 23.** Cabinet announced French Empire is to be known in future as French Union, with Indochina having limited self-government.
- Mar. 26.** U.S. Senate passed bill raising national debt limit to 300 billions.
- Mar. 27.** Argentina declared war on Japan and Germany. Red Army fought way into Danzig.
- Apr. 1.** War Crimes Commission declared leaders of enemy governments not immune, Hitler heading one list.
- Apr. 2.** Supreme Court, 5 to 4, upheld Federal Power Commission in reducing rates for natural gas. Gen. de Gaulle told France it "must rely on itself alone if it is to occupy the place it desires."
- Apr. 4.** Argentina signed Act of Chapultepec.
- Apr. 5.** Soviet Union denounced pact with Japan. Soviet Army reached Vienna. Japanese Koiso Cabinet resigned.
- Apr. 10.** Lend-Lease Act extended for another year.
- Apr. 12.** President Roosevelt died, and Vice-President Harry S. Truman succeeded to the Presidency.
- Apr. 14.** Stalin agreed to send Foreign Commissar Molotov to the United Nations Conference at San Francisco.
- Apr. 16.** After three years, the Burmese port of Taungup fell to British.
- Apr. 17.** Gandhi declared Indian delegation to San Francisco only a camouflage, saying representatives should be elected.
- Apr. 18.** U.S. Third Army entered Czechoslovakia, cutting Germany in two.
- Apr. 20.** U.S. Seventh Army took Nuremberg.
- Apr. 21.** Russian troops entered Berlin.
- Apr. 23.** Britain's five-year blackout ended, except for a five-mile coastal strip.
- Apr. 25.** Delegates of 46 United Nations met in San Francisco to draw up a Covenant.
- Apr. 26.** British Second Army captured Bremen.
- Apr. 27.** Russian and Allied armies joined at Torgau on Elbe. American Fifth Army took Genoa. Statistics showed strikes and lockouts caused 880,000 lost man-days in March.
- Apr. 28.** Mussolini executed by Italian Partisans.
- Apr. 30.** Munich captured by Seventh Army. Gen. Mark Clark declared German Army in Italy no longer existed as a military force.
- May 1.** Borneo invaded.
- May 2.** German forces in northern Italy and western Austria surrendered unconditionally. Berlin fell to the Russians.
- May 3.** British Third Army took Rangoon.
- May 4.** German forces in Netherlands, Denmark, and northwestern Germany surrendered to Marshal Montgomery.
- Secretary Ickes seized 33 more idle soft coal mines, making a total of 272.
- May 5.** German First, Nineteenth and Twenty-fourth armies surrendered to American Seventh and French First, leaving but one German army opposing Allies. Czechoslovak resistance forces took over Bohemia and Moravia, established Prague again as capital.
- May 8.** Secretary Morgenthau announced the war against Germany cost the United States 275 billions.
- May 9.** Director Fred Vinson reported Americans still faced shortages of food, clothing, shelter—and especially sugar. Formal German surrender signed in Berlin.
- May 9.** Midnight entertainment curfew and ban on racing removed.
- May 10.** President Benes and Cabinet arrived in Prague.
- May 12.** Eire removed its five-and-a-half year censorship.
- May 14.** Chinese troops re-occupied Fochow. Socialist party led in French municipal elections, with Communists a close second.
- May 15.** France announced as fifth permanent member of the United Nations Security Council.
- May 21.** Syria and Lebanon broke with France, claiming independence. OPA increased basic steel price \$2 to \$7 a ton.
- May 23.** Prime Minister Churchill resigned; election fixed for July 5. Heinrich Himmler committed suicide after capture.
- May 24.** German war dead estimated at 4,000,000 soldiers and 500,000 civilians.
- May 30.** General Le May announced destruction of 51 square miles of Tokyo by B-29 raids.
- May 31.** Combat casualties of American armed forces totaled 1,002,887. At Churchill's request Gen. de Gaulle issued a cease fire order to French troops in the Levant. Norwegian government returned, after five years' exile in England.
- June 3.** Russia stated its Communist party had increased from 3 million members in 1940 to 5 million.
- June 4.** U.S. and Great Britain appealed directly to Stalin to end Conference deadlock over right to veto discussion of international disputes. Denmark invited to San Francisco Conference.
- June 8.** Revealed that Nazis exterminated 80 per cent of German Jews, planned to eliminate all remaining in occupied Europe by summer of 1946.
- June 10.** Peruvians voted in first open election in 14 years.
- June 12.** World Court statute completed by United Nations Committee of Jurists.
- June 14.** Belgian Cabinet resigned in protest against King Leopold's return to throne.
- June 17.** Parri, northern Partisan leader, chosen Premier of Italy, all National Liberation parties to be represented.
- June 18.** Supreme Court ruled AP must disregard possible competition in passing on new members.
- June 19.** Big Five decided Axis countries should not be admitted to UNO until invited by Security Council.
- June 20.** WPB authorized 10 automobile companies to produce 691,018 cars between July, 1945, and March, 1946.
- June 22.** WPB stated lumber shortage was worst since 1940.
- June 23.** Moscow announced the new, democratized Polish National Government.
- June 24.** Over 87,000 workers idle through labor disputes.
- June 26.** Wages of 1,400,000 federal workers increased 15.9 per cent by Congress. Churchill declared Britain had been living on the bounty of the U.S. and must become independent.

Memorable Dates of 1945—Continued

- Fifty United Nations, beginning with China, signed the Charter at San Francisco.
- June 29.** All India Congress and Moslem League announced inability to agree on list of ministers for a new government under Wavell-Amery plan.
- June 30.** British Admiralty disclosed giant causeway built, linking five Orkney Islands, to block enemy entrance to Scapa Flow base.
- July 1.** Chinese took Litchow, former American air base.
- July 3.** U.S. Treasury announced government spending for first time passed a hundred billions a year.
- July 4.** Americans took control of over one-fourth of Berlin, British slightly less.
- July 5.** Britain and U.S. recognized new Polish Provisional government.
- Argentine press muzzled by censorship.
- Britain voted to elect thirty-eighth Parliament.
- Henry Morgenthau resigned as Secretary of Treasury.
- July 6.** President Benes announced that the 8,000,000 Sudeten Czechs who accepted German citizenship will be deported to the Reich within a year and a half.
- Japanese casualties in China estimated at 2,521,787; Chinese at 3,178,063.
- July 10.** The Big Three reached an interim settlement on the feeding of Berlin.
- Seventh War Loan Drive surpassed its goal of \$14 billions by \$12 billions.
- July 11.** The British Ministry of Information announced that the British Empire war casualties up to May 31 totalled 1,427,634 which included 146,760 civilians.
- July 12.** Navy announced that, since Pearl Harbor, navy and marine planes destroyed 17,000 enemy planes at a loss of 2,700 of their own. The Army lost 4,226 planes while eliminating 10,173 Japanese.
- Plot to overthrow Eamon de Valera was smashed.
- Representatives for organizations with 80,000,000 members urged ratification of United Nations Charter in Senate.
- July 14.** S.H.A.E.F., Allied European headquarters, was dissolved.
- Italy declared war on Japan.
- July 15.** King Leopold stated he would neither return to Belgium nor abdicate.
- The War Department announced the Army shipment of 2,045,829 tons of food to liberated European civilians during last year and a half.
- July 17.** Big Three met in Potsdam; President Truman presided.
- Minister of Labor Bevin declared Britain can solve postwar problems only by public ownership of major industries.
- Franco promised Spain return of monarchy.
- July 19.** U.S. Senate passed Bretton Woods measure by 61 to 16.
- July 20.** President Truman at Berlin said the U.S. wants neither territory nor money from the war.
- July 23.** Marshal Pétain went on trial.
- Fred M. Vinson became fifty-third Secretary of the Treasury.
- July 25.** Russia requested \$700 millions relief from UNRRA.
- July 26.** British Labor Party won overwhelming victory with 11,962,678 out of nearly 25,000,000 votes cast and gathered 888 of the 640 seats in the House of Commons.
- Japan given surrender ultimatum.
- July 27.** Prof. Laski claimed major aim of British Labor government was to rid Spain of Nationalist government.
- American Communists reconstituted the Communist Party.
- July 28.** U.S. Senator ratified United Nations Charter.
- Attlee replaced Churchill at Potsdam Conference.
- Canada's imports from the U.S. rose from \$498,900,000 in 1939 to \$1,447,200,000 in 1944. Her exports rose from \$578,000,000 to \$1,444,000,000.
- July 29.** Germany's casualties exceeded 4½ millions.
- July 30.** The Arab office in London said Near East will never accept Palestine as a Jewish homeland.
- Egypt delivered a request to Britain for greater independence and relief from all foreign troops.
- July 31.** Laval surrendered to U.S. Army.
- U.S. spent \$50 billions abroad in 4½ years and received \$8.8 billions.
- Aug. 1.** Total federal expenditures for the fiscal year ending June 30 was estimated at \$85,288,000,000.
- Aug. 2.** Potsdam Conference reached Big Three agreement on reparations, territorial control affecting Russia, Poland, control of Germany and war criminal trials.
- Aug. 3.** President Truman stated there were no secret agreements made at Potsdam.
- Aug. 6.** A new weapon, the atomic bomb, pulverized 60 per cent of Hiroshima in Japan.
- Aug. 6.** Russia resumed diplomatic relations with Finland and Rumania.
- Eisenhower said Germans in the American zone could "form local unions and engage in local political activities."
- Aug. 7.** Tito barred King Peter and "all reactionary emigrés" from Yugoslavia.
- Aug. 8.** Soviet Union declared war upon Japan, and at once attacked along the Manchurian border.
- Aug. 9.** Democratic forces of Argentina held first public meeting since Farrell became dictator.
- British elections returned to Parliament: Labor, 390; Conservative, 195; National, 2; Liberal National, 13; Communist, 2; Independent Labor, 3; Commonwealth, 1; Independent, 17.
- Aug. 10.** Statistics showed the War cost the U.S. over 251,000 combat dead, and 300 billions in actual war expenditures.
- Aug. 14.** President Truman announced Japan's reply constituted full surrender.
- Sir Stafford Cripps stated radar saved Britain, and played a greater part in the war than the atomic bomb.
- U.A.W. of CIO declared the no-strike pledge had ended.
- Aug. 15.** Soviet troops raced through Manchuria 100 miles a day on a 2800-mile front.
- Marshal Pétain convicted of treason and sentenced to death. (Two days later General De Gaulle commuted the sentence to life imprisonment.)
- Army procurement program cut 23½ billions.
- Aug. 16.** Turkey ratified United Nations Charter.
- Aug. 17.** France ratified the United Nations Charter.
- Aug. 18.** France by treaty returned to China Kwangchowang, formerly leased for 99 years.
- Surrender began of Japanese forces in Manchuria.
- Aug. 19.** Stated that the Allies sent 1,404,966 tons of civilian supplies into Italy from Badoglio's capitulation in 1943 to end of February, 1945.
- Moscow announced a new five-year plan.
- Aug. 20.** Secretaries of Army and Navy told Justice Dept the agreement to postpone 25 major anti-trust suits was no longer in effect.
- Aug. 22.** Henry Pu Yi, former "boy Emperor," and Japanese puppet in Manchukuo, interned.
- Aug. 23.** United Nations Charter unanimously ratified by British Parliament.
- Tokyo stated American bombings destroyed 44 cities, and killed, injured or made homeless ten million men, women and children.
- American, British, and French occupation forces entered Vienna.
- President Truman publicly denounced Franco and his Spanish government.
- Aug. 24.** Chiang Kai-shek signed Chinese ratification of United Nations Charter.
- Aug. 26.** Communist leader Mao Tse-tung complied with Chiang's third request to confer at Chungking.
- Amnesty for those guilty of taking hostages and damaging property declared by Greek government.
- Aug. 28.** U.S. troops landed in Japan for first military occupation in thousands of years.
- Labor Dept. announced 500 strikes in July, 1,500,000 man-days lost. Also that cost of living index in July reached 129.4 per cent of 1935-39 average—highest during war years.
- Aug. 30.** Secretary Byrnes stated whole Lend-Lease debt would not be cancelled; settlements would be negotiated.
- Aug. 31.** Revealed the death total in Hiroshima from atomic bombing was 450,000, with 90 per cent of the houses "instantly crushed."
- Sept. 1.** Japanese people told they would vote in general election Jan. 12-31 in accordance with the Potsdam Declaration.
- Sept. 2.** Formal Japanese surrender aboard the battleship *Missouri* in Tokyo Bay.
- Stalin announced Russia would regain southern Sakhalin and Kurile Islands.
- Sept. 4.** British naval force took control of Singapore.
- British Health Ministry stated birth rate for 1944 highest for 20 years, death rate lower than 1938 and infant mortality lowest on record.
- Sept. 4.** Three New Zealand Federations—Farmers, Employers, and Manufacturers—and Association of Chambers of Commerce formed united front to fight trend to "National Socialization."
- Sept. 5.** As of Sept. 16, all major restrictions on railroad passenger travel, except ban on short haul sleeper service, were discontinued.
- W.P.B. reported American industrial capacity had more than doubled during War, and profits increased 120 per cent despite heavy taxes.
- Sept. 6.** OPA announced approaching end of most rationing but said price and rent controls must stay as long as inflation threatened.
- Canada announced she would adopt national flag and her people would be Canadian citizens under British Crown.
- Japanese labor unions, outlawed for 14 years, began re-organization.
- White-collar workers of Westinghouse Electric in six states voted to strike unless granted incentive pay bonus like day workers.
- Sept. 7.** Japanese Admiral revealed attack on Pearl Harbor launched from four carriers 200-250 miles from Oahu.

Memorable Dates of 1945—Continued

- Sept. 8.** Plans reported for \$2,500,000 of public works for next 12 months. States, counties and cities planned \$1,000,000,000.
- Sept. 9.** China accepted surrender of Japanese forces.
- Sept. 10.** Vikund Quisling of Norway sentenced to death for military treason, high treason, theft, embezzlement, and murder.
The war cost Britain 240,000 lives in armed forces, 31,000 in the merchant navy, 60,000 civilians; \$4,800,000,000 in damage on land, and \$920,000,000 at sea.
- Sept. 11.** First 40 war criminals of Pacific war arrested; Former Premier Tojo tried to commit suicide by shooting.
- Sept. 12.** Japan formally surrendered her huge southern armies to Mountbatten in Singapore.
- Sept. 13.** *Pravda* demanded compensation for damage done the Soviet Union by the German invasion, which it estimated at 679 billion rubles.
- Sept. 14.** Imperial economic isolation opposed by Australia and New Zealand.
Joint Congressional Committee appointed to investigate Pearl Harbor.
U.A.W. demanded 30 per cent wage increase for all automobile workers.
- Sept. 15.** Council of Foreign Ministers agreed to place Italian colonies under UNO trusteeship.
- Sept. 16.** World crop of wheat for 1945 stated as 5 per cent below 1944, 8 per cent below 1935-39 average.
- Sept. 17.** President Truman stated U.S. prepared to fill major relief needs of Europe, but cannot keep Europe above a minimum level of subsistence.
- Sept. 18.** French labor circles estimated 1,500,000 German and Italian prisoners of war would be working for France before the year's end.
Major Powers agreed Korea be a free and independent nation, Koreans advised to be patient and cooperative.
- Sept. 21.** Claims for unemployment compensation reached 1,479,606.
- Sept. 23.** Egyptian Cabinet demanded withdrawal of British troops, and incorporation of the Anglo-Egyptian Sudan into Egypt.
- Sept. 25.** The Annamites, opposing return of French rule and seeking independence, staged a violent uprising in Indochina.
- Sept. 27.** Emperor Hirohito made an unprecedented visit to General MacArthur in Tokyo.
- Oct. 4.** President Truman ordered seizure of 26 oil producing and refining companies. Also replaced WPB with a civilian Production Administration.
- Oct. 5.** After adjournment of deadlocked foreign ministers' meeting, Secretary Byrnes declared "peace cannot be the exclusive concern of a few presently powerful States."
- Oct. 9.** Gen. George O. Marshall, Chief of Staff, in his biennial report, advocated universal military training for the U.S. to an extent that an army of 4 million could be mobilized within a year.
During the last five years the U.S. doubled its industrial output and produced \$186 billions worth of weapons and supplies, announced J. A. Krug, chairman of the War Production Board.
- Oct. 10.** The Office of Military Government announced that more than 75 per cent of Germany's industry remains intact.
- Oct. 11.** MacArthur ordered the Japanese government under Premier Shidehara to institute the following reforms: the vote for women, encouragement of labor unions, liberalization of education, abolition of oppressive supervision of thoughts and actions, democratization of industries.
- Oct. 12.** Eisenhower deprived all Nazis of a vote in Germany. Entire holdings of I. C. Farbenindustrie, valued at \$2 billions was seized by the Allies.
- Oct. 13.** Four hundred scientists who developed atomic bomb asserted that an effort to keep atomic knowledge from the rest of the world "will lead to a war more savage than the last."
- Oct. 14.** The Indonesian People's Army declared war against the Netherlands.
- Oct. 18.** Allies charged 24 German war leaders with plotting against the peace and with atrocities in war.
- Oct. 19.** President Angarita of Venezuela was overthrown by full-scale revolution.
- Oct. 20.** U.S. and Belgium settled lend-lease relations with U.S. agreeing to repay in various ways the \$90 millions of reverse Lend-Lease surplus. Belgium was the only country that supplied U.S. with more aid than it received.
- Netherlands given \$50,000,000 credit loan by Export-Import Bank.
- Oct. 21.** Dr. Romulo Betancourt, socialist revolutionary, assumed control of Venezuela.
- Oct. 22.** British Admiralty announced Royal Navy losses of 730 ships and 49,305 men during war.
- Oct. 24.** Secretary Byrnes signed United Nations Charter. Russia demanded that Finland pay \$79,000,000 in reparations during 1946.
President Beneš of Czechoslovakia nationalized key industries.
Final returns in France's election revealed Communists won 152 seats; Socialists, 141 and Mouvement Republicain Populaire, 138.
MacArthur ordered establishment of free and independent press in Japan.
- Oct. 25.** Dr. Robert Ley, Chief of the German Labor Front, committed suicide.
- Oct. 29.** The trial of General Yamashita, Japanese commander of the Philippines, opened at Manila.
General Marshall claimed demobilization has grown into disintegration, not only of the armed forces, but of all conception of world responsibility.
- Oct. 30.** Prime Minister Attlee announced he would visit President Truman on Nov. 11 to discuss atomic bomb. President Vargas of Brazil resigned.
- Oct. 31.** Russia demanded \$300,000,000 reparations from Italy for herself and Balkan states.
- Nov. 1.** British Labor government said that Civil Aviation and Cable and Wireless, Ltd., would be state-owned.
Terrorists in Palestine crippled railroad traffic.
- Nov. 2.** U.S. recognized Hungarian provisional government.
Riots provoked by Palestine issue flared in Egypt.
- Nov. 6.** Molotov asserted atomic bomb cannot be kept secret and promised Russians atomic energy.
De Gaulle resigned from Constituent Assembly.
- Nov. 7.** British jet plane made new speed record of 606 m.p.h.
- Nov. 12.** Cordell Hull awarded 1945 Nobel Peace Prize.
- Nov. 13.** De Gaulle selected as President of the French Provisional Government.
- Nov. 14.** U.S. Senate committee accused Swiss government and Swiss banks of aiding Nazis.
- Nov. 15.** Joint Congressional Committee opened investigation of Pearl Harbor attack.
- Nov. 16.** Food riots broke out in Japan.
- Nov. 20.** President Truman appointed Gen. Eisenhower Army Chief of Staff and Admiral Nimitz Chief of Naval Operations.
- Nov. 21.** Justice Robert H. Jackson opened Nuremberg trial against Nazi war criminals.
United Automobile Workers, CIO, went on strike.
- Nov. 23.** Rationing of meat, butter, and all other red point foods ended.
- Nov. 24.** Preparatory Commission of UNO opened its meeting in London.
Ferruccio Parri resigned as Premier of Italy.
- Nov. 25.** Changking reported Russia demanded economic participation in Manchuria.
- Nov. 27.** Gen. Hurley resigned as Ambassador to China, charging the State Dept. was preventing him from carrying out American policy. The President at once appointed Gen. Marshall in his place.
- Nov. 29.** British took Surabaya in Indonesia.
Yugoslavia declared a republic by Constituent Assembly.
- Dec. 8.** Navy doctors stated that tests of sulfa drugs in a Calcutta cholera outbreak may have developed a complete cure for this dread disease.
Admiral King declared, "Japan lost the war because she lost command of the sea."
- Dec. 10.** Authoritative opinions gathered by N.A.M. agreed that the first constructive uses of atomic energy will be in medicine, biology, chemistry and physics.
The Dow-Jones index of industrial stocks reached the 1945 high at 196.59, with a year's sale of 390 million shares.
President Truman appointed three Americans to represent the U.S. at the first U.N.O. meeting, Jan. 12.
- Dec. 18.** First total eclipse of moon since 1942.
UNO Preparatory Commission decided to have the organization's permanent home in the U.S.
- Dec. 27.** The Pope appointed Archbishop Francis J. Spellman and three other Americans Cardinals.

WHAT WAS REALLY THE MOST IMPORTANT EVENT OF 1945?

As an aid to perspective in considering the past momentous and bewildering year, we asked a small group of scientific and professional folk the above question: What happening was truly most significant? Each was to express a personal judgment. We asked each to speak, not as physicist, educator, financier or journalist only, but as a mature American and citizen of the world with special experience.

Here is what they say.

Dr. Robert A. Millikan
Famous physicist,
Author, and Nobel
Prize winner.

"The success of the physicist, chemists and engineers in utilizing the energy of uranium fission for producing an explosive many thousand times more destructive than any in the past.

"What the bomb has done is to give a demonstration which sinks into the consciousness of all races and conditions of men that man must eliminate global wars now."

Bernard M. Baruch
Elder Statesman
and Government
adviser, Author,
Financier.

"To my mind the most important happening was the constant trend away from control by the individual to control by the Government. This was horribly exemplified in the Nazi and Fascist movements in Germany, Italy and Japan.

"There is also a trend in all governments in the United Nations Organization toward domination over the individual, making the State the master instead of the servant it should be.

"If this trend continues to the extreme it will leave no freedom of any kind, and no dignity of man."

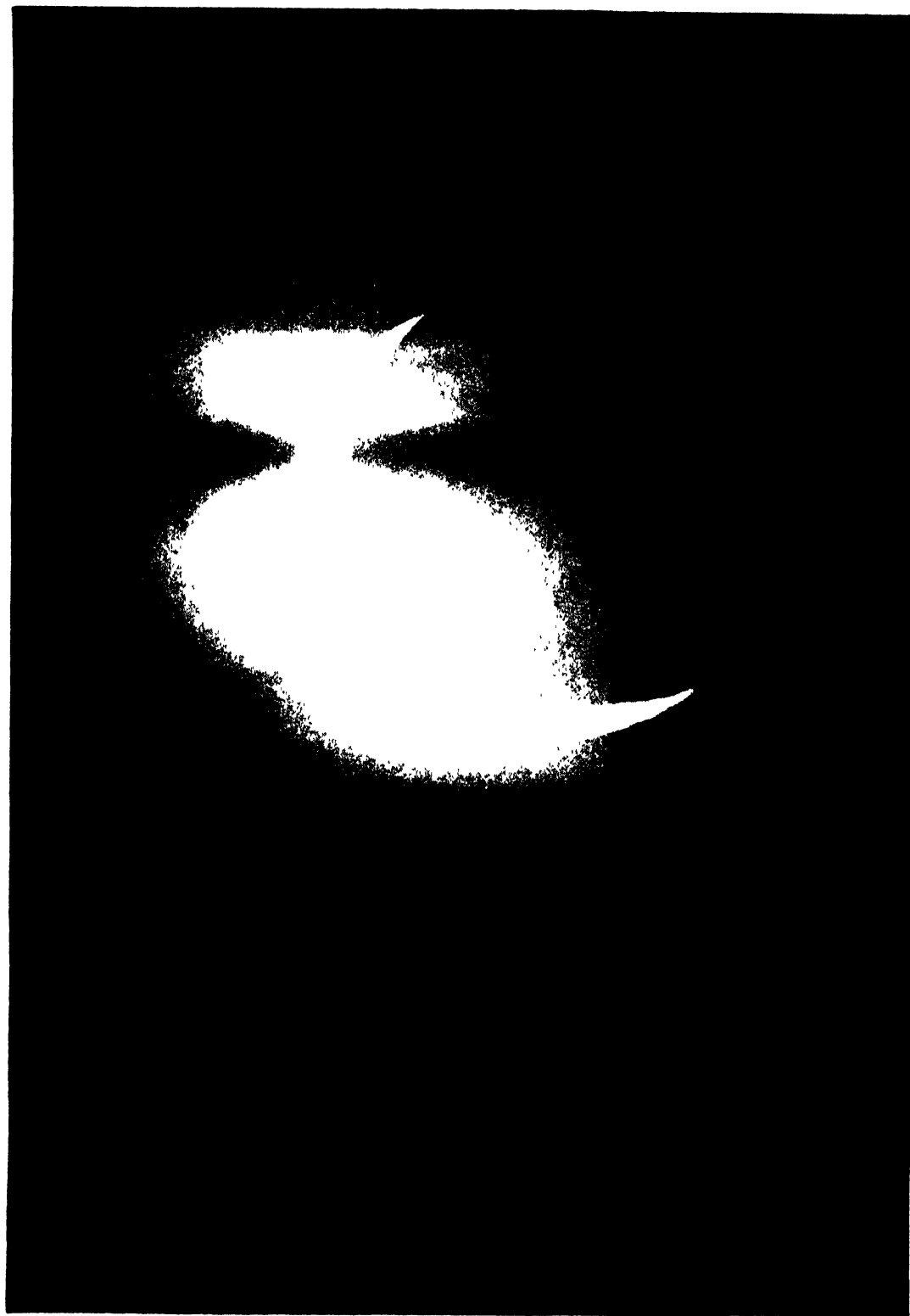
Virginia C. Gildersleeve
Dean of Barnard,
Member of Commis-
sion to Study the Or-
ganization of Peace.

"I consider the most important happening the unanimous adoption at San Francisco of the Charter of the United Nations.

"As I was myself present at this great event, I am especially conscious of its significance, but I believe that in future years history will agree with my estimate, and consider that at this great meeting a new era opened."

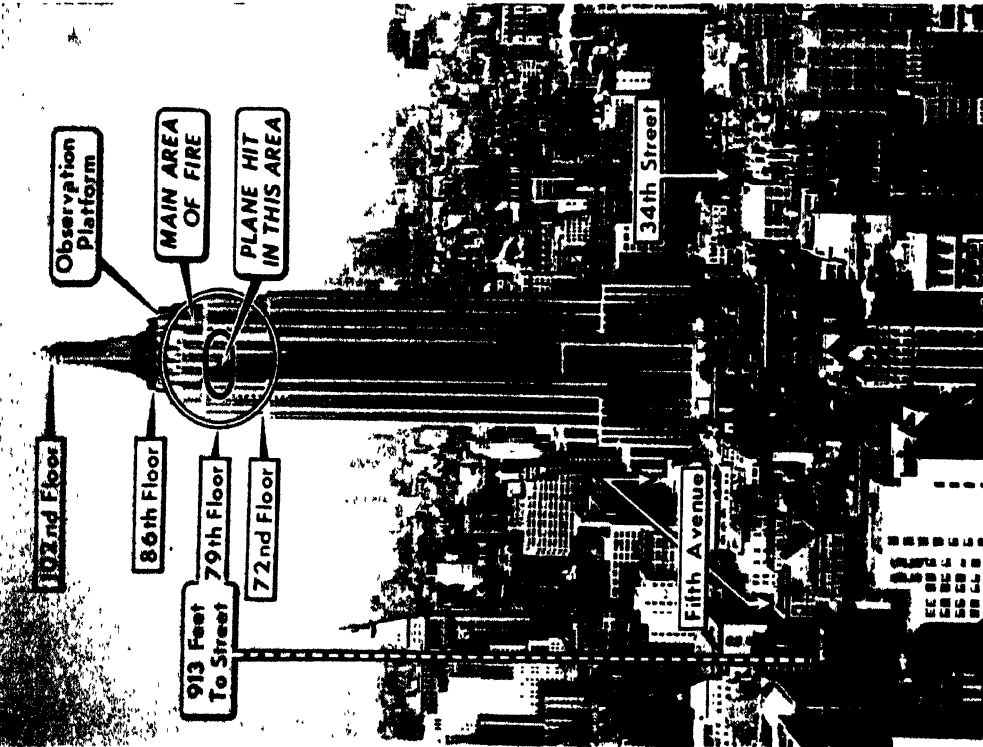
John Temple Graves
Editor, Author,
Lecturer

"In any other year something not in the big headlines, intangible, might be the most genuinely important happening. But not in a year which has seen atomic power released. To think of any event as more important than that is to be dangerously without the imagination and sense of proportion for which these atomic times are calling."

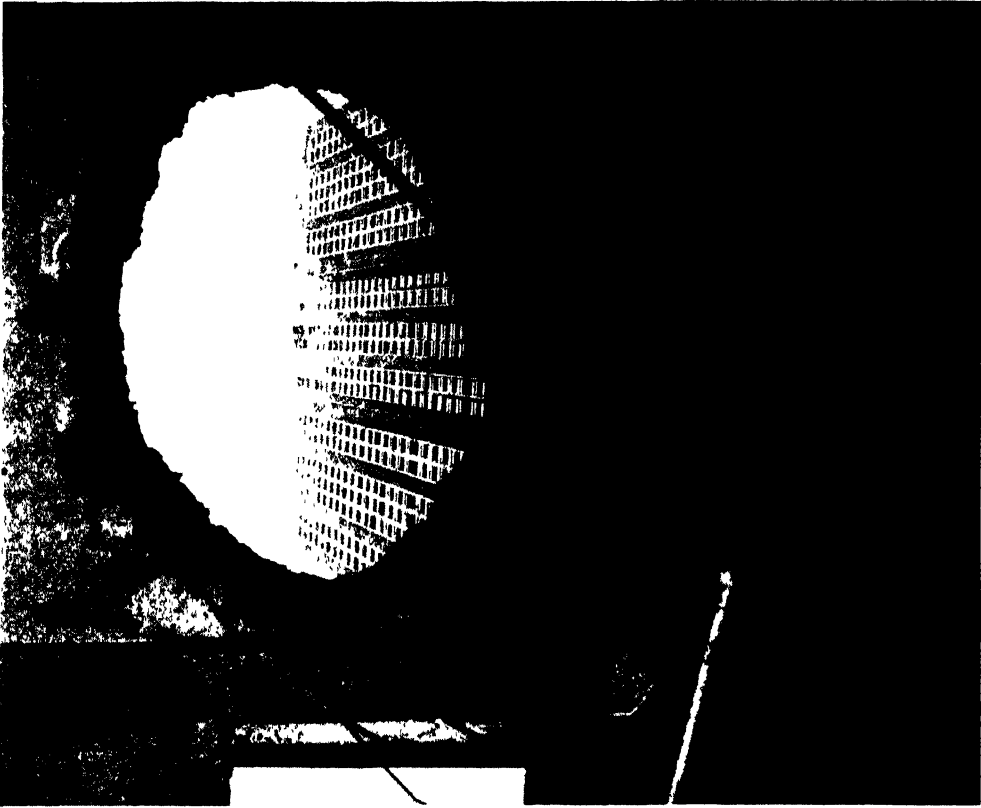


WHEN THE SUN BECAME A CRESCENT

The 85 percent eclipsed sun as it rose over the Continental Divide of the Rocky Mountains, east of Butte, Montana, July 9, 1945. (Photo by Peter A. Leavens and George V. Plachy, New York City Amateur Astronomers Expedition.)



THE EMPIRE STATE BUILDING PLANE CRASH, JULY 28
(Press Assn. Inc)



LOOKING THROUGH HOLE IN ROOF OF PENTHOUSE
Part of plane crashed through this roof, across 33rd Street.

THE NEW INTERNATIONAL YEAR BOOK 1945

ACADEMY OF ARTS, Royal. The Royal Academy of Arts, founded by King George III in 1768, is maintained, through the public support of its exhibitions, for the promotion of the Fine Arts. The Membership consists of forty Academicians and thirty Associates, elected by ballot by the Members from among the most distinguished painters, sculptors, architects, and engravers practising in England.

During January and February, 1945, the Royal Academy lent its Galleries for Exhibitions of the British Theatre (British Drama League), Soviet Graphic Art, and the New English Art Club. From May 5 to August 12 it held its Summer Exhibition (the 177th) as usual. For various periods in October, November and December the Galleries were lent for Exhibitions of National War Pictures, the London Group, the Royal Institute of Painters in Water Colours, the Royal Society of Portrait Painters and the National Society.

The Officers of the Royal Academy for 1945 were as follows: President and Trustee, Sir Alfred J. Munnings, P.R.A.; Keeper, Sir Gerald F. Kelley, R.A.; Treasurer and Trustee, E. V. Harris, O.B.E., R.A.; Trustees, Sir William Reid Dick, K.C.V.O., R.A., and W. Russell Flint, R.A.; Secretary, Sir Walter R. M. Lamb, K.C.V.O.

ACADEMY OF ARTS AND LETTERS, American. A society founded in 1904 by members of the National Institute of Arts and Letters. Membership is limited to 50, vacancies being filled by elections from the membership of the Institute.

On May 18, 1945, a Special Meeting of the Academy was held, followed by a Public Ceremony given jointly with the National Institute of Arts and Letters at which new members of the Academy and Institute were inducted, fifteen \$1,000 "Arts and Letters" Grants given, and medals of both institutions awarded. An exhibition of sculpture by Paul Manship, works by newly elected members of both organizations, and Grantees in Art, was opened on the same day in the Art Gallery, and continued through June 29. On November 2 the Annual Meeting of the Academy was held at the Academy building. An Exhibition in the Art Gallery of paintings, drawings, and water-colors by contemporary American Artists purchased by the Academy for presentation to Museums in the U. S. and Canada, and a comprehensive exhibition including the more recent works by Paul Manship was opened and continued through Dec. 31, 1945. This was free to the public.

The membership as of November, 1945, consisted of the following in the order of their election: Bliss Perry, Nicholas Murray Butler, Archer

Milton Huntington, Newton Booth Tarkington, Royal Cortissoz, Wilbur L. Cross, Hermon A. MacNeil, James Earle Fraser, Robert Frost, James Truslow Adams, Adolph Alexander Weinman, Walter Damrosch, Anna Hyatt Huntington, Paul Manship, Eugene O'Neill, Henry Dwight Sedgwick, Walter Lippmann, M. A. De Wolfe Howe, Frank Jewett Mather, Jr., Stewart Edward White, Deems Taylor, Van Wyck Brooks, Herbert Putnam, William Adams Delano, Charles Warren, Bernard Berson, Chauncey Brewster Tinker, Albert Spalding, Sinclair Lewis, Willa Cather, Ellen Glasgow, Thornton Wilder, Edna St. Vincent Millay, Carl Sandburg, Agnes Repplier, Charles Hopkinson, Eugene Speicher, Henry R. Shepley, John Alden Carpenter, John Sloan, Barry Faulkner, Edward W. Redfield, Gifford Beal, Frederick Law Olmsted, Ernest Bloch, John Marin, Edward McCartan, Douglas Southall Freeman, Robinson Jeffers, and Lee Lawrie.

Officers elected in 1945 were: President, Walter Damrosch; Chancellor and Treasurer, James Truslow Adams; Secretary, Van Wyck Brooks; Directors: William Adams Delano, Barry Faulkner, Paul Manship, Eugene Speicher, Deems Taylor, and Chauncey Brewster Tinker. Administrative offices are at 633 West 155 St., New York City.

ACADEMY OF DESIGN, National. An organization of American artists, founded in New York in 1825 by Samuel Morse and incorporated in 1828 for the purpose of "cultivation and extension of the arts of design." In 1906 the Society of American Artists merged with the Academy.

The Academy maintains annual Exhibitions of painting, sculpture, and graphic arts, to which all artists may contribute, subject to jury. At these exhibitions various prizes are awarded. It conducts an Art School at which no tuition is charged. It also administers the Henry W. Ranger Fund for the purchase of paintings to be presented to various museums. Its membership is limited to professional painters, sculptors, workers in the graphic arts, and architects.

The Associates elected at the annual meeting in December, 1945, were: *Sculptor*—Mitchell Field; *Architect*—Charles Downing Lay; *Workers in the Graphic Arts*—Stephen Csoka, Norman Kent, Clare Leighton, Leo Meissner, and Lynd Ward; *Aquarellists*—Peter Helck, Julius Delbos and Donald Teague.

Elected Officers are: President, Hobart Nichols; Vice-President, John Taylor Arms; Second Vice-President, Paul Manship; Corresponding Secretary, Georg Lober; Recording Secretary, Raymond P. R. Neilson; Assistant Corresponding Secretary, Wal-

ter Farndon; Treasurer, F. Ballard Williams; Assistant Treasurer, Charles Keck. The Galleries and Executive Offices are located at 1083 Fifth Avenue, New York.

ACADEMY OF SCIENCES, National. The National Academy of Sciences originated from the need of the Government for technical scientific advice in connection with the Civil War. Its charter, passed by Congress and approved by President Lincoln in 1863, provides that it "shall, whenever called upon by any department of the Government, investigate, examine, experiment, and report upon any subject of science or art, the actual expense of such investigations . . . to be paid from appropriations which may be made for the purpose, but the Academy shall receive no compensation whatever for any services to the Government of the United States."

The membership of the Academy is limited to 450 citizens of the United States and 50 foreign associates. There are no applications for membership. Nominations are presented by the sections representing different sciences.

In order to permit the organization of the nation's scientific resources on a more inclusive scale than was possible within the membership of the Academy itself, the National Research Council was organized by the National Academy of Sciences at the request of President Wilson in the spring of 1916, and was established on a permanent basis on May 11, 1918, by Presidential Executive Order, "to promote research in the mathematical, physical, and biological sciences, and in the application of these sciences to engineering, agriculture, medicine, and other useful arts, with the object of increasing knowledge, of strengthening the national defense, and of contributing in other ways to the public welfare."

The membership of the Council is composed largely of appointed representatives of approximately eighty-five of the major scientific and technical societies of the country, together with representatives of certain other research organizations, representatives of Government scientific bureaus, and a limited number of members at large. These members are appointed by the President of the National Academy of Sciences. Serving on Committees of the Council are approximately 1,800 outstanding scientists.

The Academy-Research Council does not maintain scientific laboratories but functions through sponsorship of conferences, technical committees, surveys, scientific publications, and administration of funds for research projects and fellowships.

The administrative costs of the Academy and Council are charged against the income of a permanent endowment given, together with the building, by the Carnegie Corporation. Financial support of scientific projects is obtained from contracts with governmental and private agencies and from special grants from foundations, societies, and individuals.

Many highly confidential projects contributing directly to the war effort were financed through contracts with the Office of Scientific Research and Development, War Production Board, War and Navy Departments, and other Federal agencies, as well as by grants from various sources.

The Academy issues the *Proceedings*, *Scientific Memoirs* and *Biographical Memoirs*. An Annual Report is made to Congress and published.

The Council issues a series of *Bulletins*, *Reprints*, and *Circulars*. A list of publications, with prices, is available upon request.

Academy officers: Frank B. Jewett, President; Luther P. Eisenhart, Vice President; Detlev W. Bronk, Foreign Secretary; F. E. Wright, Home Secretary; J. C. Hunsaker, Treasurer; George B. Darling, Executive Secretary.

Council officers: Ross G. Harrison, Chairman; George B. Darling, Executive Secretary.

The building of the National Academy of Sciences and the National Research Council is located at 2101 Constitution Avenue, Washington, D. C.

ACCIDENTS. Accidental deaths in 1945 totalled approximately 96,000, an increase of less than 1,000, or 1 per cent, from the 1944 total of 95,237, according to National Safety Council estimates. Non-fatal injuries, also, are estimated to have increased 1 per cent from 10,200,000 to 10,300,000.

Direct costs—including wage loss, medical expense, overhead costs of insurance, and property damage in motor vehicle accidents and in fires—were approximately \$3,900,000,000 in 1945. Indirect costs of occupational accidents—such as interference with production, damaged materials and machinery, time lost by workers other than the injured—amounted to about \$1,300,000,000, which carried total costs in 1945 up to about \$5,200,000,000.

The following table shows the 1945 and 1944 death totals for the principal classes of accidents, together with the change in each class:

	1945	1944	Change
Total	96,000	95,237	+1%
Motor vehicle	28,500	24,282	+17%
Public non-motor-vehicle—			
Civilian	15,500	15,000	+3%
Home—civilian	33,500	33,000	+2%
Occupational—civilian	16,000	16,000	0
Military personnel	6,500	11,500	-43%

Motor vehicle deaths include some which also are shown as occupational, military personnel, and home. This duplication amounted to about 4,000 in 1945 and 4,500 in 1944. The 1944 all-accident and motor vehicle totals are U. S. Census Bureau figures. All others are National Safety Council estimates.

The 1945 death rate per 100,000 population was 71.6. Only five years since 1900 had lower rates—and the lowest was 68.4, in 1921.

Heart disease, cancer, cerebral hemorrhage and nephritis were the only causes of death exceeding accidents in 1943. Preliminary information indicates that accidents ranked fifth again in 1945. Among males alone, accidents are the third most important cause of death, being exceeded only by heart disease and cancer. From age 2 to 28, both sexes, accidents caused more deaths than any disease in 1943. Among males alone they were first from age 2 to 38.

The 1945 accidental deaths were distributed by age about as follows: 0-4 years, 7,850; 5-14 years, 6,850; 15-24 years, 12,600; 25-44 years, 19,400; 45-64 years, 20,300; 65 years and older, 29,000. Probably more significant are the death rates per 100,000 population: 0-4 years, 62; 5-14 years, 31; 15-24 years, 59; 25-44 years, 50; 45-64 years, 73; 65 years and older, 290. The rate for 5-14 years is only one-ninth of the 65 and older rate. In most recent years the rate for elderly people rose, while that for school children decreased.

There was only one disaster in 1945 that caused more than 50 deaths, compared to 8 such catastrophes in 1944. This one disaster was a tornado in Oklahoma, Missouri and Arkansas. Deaths numbered 119. Another tornado in Alabama and Mississippi killed 33. A collision of two railroad trains resulted in 34 deaths. But nearly all of the 1945

fatality total came from one-or-two-death accidents.

Motor Vehicle Accidents. Deaths from motor vehicle accidents totalled 28,500 in 1945, a 17 per cent increase over 1944. Nearly all of this increase came in the last five months of the year, after gasoline rationing was discontinued. However, the 1945 death total was still 29 per cent below the prewar high of 39,969 in 1941. The death rates per 100,000,000 vehicle miles traveled were: 1941, 12.0; 1944, 11.3; 1945, 11.4.

Provisional reports indicate that rural accident deaths totalled approximately 17,100 in 1945, a 25 per cent increase from 1944. Urban accident fatalities went up about 7 per cent to 11,400. Rural deaths were 34 per cent below 1941, while urban deaths were down only 20 per cent.

Pedestrian deaths numbered approximately 11,200, 14 per cent more than in 1944 but 17 per cent less than in 1941. Non-pedestrian deaths totalled 17,300, up 20 per cent from 1944 but 35 per cent below 1941.

There were increases in deaths in every age group, but the amount of increase varied considerably. For children under 5 years the death total was 1,350, a 12 per cent increase from 1944. Children 5 to 14 years had 2,550 deaths, a rise of 24 per cent—the largest change for any age group. There were 5,250 deaths of persons 15 to 24 years, up 18 per cent. The death total for 25 to 44 years was 7,700, or 17 per cent more than in 1944. Persons 45 to 64 years had 7,000 fatalities, a 14 per cent increase. Among people 65 years and older the death total was 4,650, 21 per cent above 1944.

In addition to the deaths, about 1,000,000 persons received non-fatal injuries in motor vehicle accidents during 1945, or one out of each 134 persons in the U. S. Wage loss, medical expense, and overhead costs of insurance amounted to about \$800,000,000, and property damage to approximately \$650,000,000—a total of \$1,450,000,000.

Other Public Accidents. The 1945 death toll from public non-motor-vehicle accidents was approximately 15,500, an increase of 500 from the 1944 total of 15,000. The largest increases were in drownings, falls and air transport accidents. Firearms accidents and fatal burns, however, decreased.

Children under 5 years had about the same number of deaths as in 1944, while those 5 to 14 years old had 4 per cent fewer deaths. The death total for persons 15 to 24 years went down 8 per cent. Increases of 7 to 12 per cent were recorded in the older age groups.

Injuries numbered approximately 1,950,000. The cost of fatal and non-fatal accidents is estimated at \$400,000,000 for wage loss, medical expense, and overhead costs of insurance.

Home Accidents. There were approximately 33,500 deaths from home accidents, a 2 per cent increase from the 1944 total of 33,000. Injuries numbered about 5,000,000. Wage loss, medical expense, and overhead costs of insurance amounted to \$600,000,000.

Changes in most types of fatal home accidents were small. Poisonings increased 5 per cent and falls 3 per cent; firearms accidents numbered about the same as in 1944, while mechanical suffocation (largely infants smothered by bed clothes) and burns decreased approximately 4 per cent each. Asphyxiations, however, rose about 15 per cent.

Decreases in deaths occurred in the younger age groups: 3 per cent among children under 5 years; 7 per cent in the 5 to 14 year group; and 8 per

cent for persons 15 to 24 years. Increases of 4 to 6 per cent were reported in the older age groups. However, compared with prewar 1941 the death total for children under 5 years showed a considerable increase—18 per cent.

Occupational Accidents. Deaths from occupational accidents numbered approximately 16,000 in 1945, about the same number as occurred in 1944. Employment decreased approximately 2 per cent. Non-fatal injuries numbered about 2,000,000.

Direct costs of occupational accidents—wage loss, medical expense, and overhead costs of insurance—amounted to about \$1,050,000,000. Indirect costs, such as time lost by supervisors and workers other than the injured, interrupted production schedules, and damaged machinery are estimated at \$1,300,000,000, which places total costs for these accidents at \$2,350,000,000.

These figures measure the size of the occupational accident problem, but they do not indicate the full extent to which accidents interfere with production. Off-the-job accidents which keep employees away from work, or lower their efficiency while at work, must be counted as a factor in restricting output. The toll resulting from off-the-job accidents was 28,000 workers killed and 2,500,000 injured. The total loss from accidents to workers, on and off the job, thus was 44,000 deaths and 4,500,000 injuries resulting in lost time beyond the day of the accident.

A. D. BATTEY.

ADMIRALTY ISLANDS. A group of islands (Manus is the largest) in the Australian mandated Territory of New Guinea, of which it forms the Manus district. Total area: 800 square miles. Population (June 30, 1941): 14,234 natives. Capital, Lorengau (on the island of Manus).

ADVANCED STUDY, Institute for. An institution of higher learning founded in 1930 by Mr. Louis Bamberger and Mrs. Felix Fuld. The Institute is different in character from any other American educational institution in that it is planned for students who wish to pursue advanced research beyond the level of the doctor's degree. It has no tuition fee, no routine requirements, no examinations, and awards no degrees. The work is largely individual, though there are seminars and courses of lectures in some subjects. Since the individuals who attend the Institute are in many cases extremely eminent in their subjects, the word "student" is not used, but they are rather designated as "members." The two groups, the faculty and members of the Institute, are in reality a body of scholars working together.

The Institute is supported entirely by endowment. Located at Princeton, N. J., the Institute has no official connection with Princeton University, though there is a great deal of informal cooperation between the two institutions.

During the year 1945 work largely returned to a peacetime basis. The enrollment of temporary members has returned to normal. Two additions have been made to the Faculty of Mathematics, Professor Carl L. Siegel, formerly of the University of Göttingen and Professor Wolfgang Pauli of the Eidgenössische Technische Hochschule in Zürich as Visiting Professor. During the month of December, the award of a Nobel Prize to Professor Pauli was announced for his discovery of the so-called Pauli Exclusion Principle. During the year Professor Benjamin D. Meritt of the School of Humanistic Studies served as Eastman Professor to the University of Oxford. Among the publica-

tions of the Institute during this year was the second volume of Dr. de Tolnay's life of Michelangelo, *Mathematical Cuneiform Texts* edited by Dr. Neugebauer and Dr. Sachs, as well as a large number of articles published in journals of various learned societies.

The Director of the Institute is Dr. Frank Aydelotte and Dr. Abraham Flexner is Director Emeritus. Headquarters are in Fuld Hall, Olden Lane, Princeton, N. J.

ADVENT MOVEMENT. A religious movement which originated in America with William Miller (1782-1849), who believed in the imminent, personal second coming of Christ. There are six Adventist bodies in the United States, the largest being the Seventh-day Adventist Denomination, formally organized in 1860, which observes Saturday as the Sabbath of the Scriptures. Headquarters, Takoma Park, Washington, D.C. For statistics, see RELIGIOUS ORGANIZATIONS.

AEGEAN ISLANDS. The islands in the Aegean Sea near Turkey in Asia; under Italian rule from 1912 to 1944 (see below under *Political Future*). They include the Dodecanese group with Rhodes and Castellorosso. Their area and population together with their Italian names in parentheses are given in the accompanying table.

Island	Sq. mi.	Pop. (1936)
Astropalia (Stampalia).....	44	2,008
Casos (Caso).....	27	1,890
Castellorosso.....	4	2,238
Cos (Coo).....	111	19,781
Kalyzmos (Calino).....	49	15,247
Karohi (Calohi).....	12	1,461
Karpathos (Scarpanto).....	118	7,770
Leros (Lero).....	28	13,657
Lipso (Liso).....	7	977
Nisyros (Nisiro).....	18	3,391
Patmos (Patmo).....	22	3,184
Rhodes (Rodi).....	545	61,886
Symi (Simi).....	25	6,195
Tilos (Piscopi).....	25	1,215
Total.....	1,035	140,848

The total population in 1936 (140,848) comprised 85 percent native, 12 percent Italian, and 3 percent foreign. On Jan. 1, 1940, the total population was 122,000. Chief towns (1936 populations): Rhodes (capital) 27,466, Kalyzmos 15,247, Cos 9,852, Symi 6,195.

Production, etc. The principal agricultural products consist of grapes, olives, tobacco, oranges, and vegetables. Livestock (1938): 62,735 goats, 51,907 sheep, 6,460 horses, mules, and donkeys, 4,710 oxen, 2,656 swine. Sponge fishing, and the manufacture of artistic pottery and tiles, tobacco, wine, olive oil, and oriental carpets are the chief industries. Trade (1938): imports 157,421,000 lire; exports 21,851,000 lire (lira was worth \$0.0526 for 1938). Roads (1940): 391 miles.

Political Future. Under the terms of the armistice granted to Italy by the Allies during September, 1944, Italy officially relinquished her hold over the Dodecanese. German occupation continued until the unconditional surrender of Germany to the Allies which became effective at 6:01 P.M., May 8, 1945, U.S. Eastern War Time. Thereafter the islands were subject to Allied control. Italian Foreign Minister de Gasperi in a letter dated Aug. 22, 1945, to U.S. Secretary of State James F. Byrnes agreed to cede the Dodecanese to Greece.

AERONAUTICS. The termination of hostilities against Germany and Japan in 1945 brought an end to the

mass manufacture of combat aircraft in the United States, although the development of new types, particularly of the jet-propelled planes, was not relaxed. A small portion of the huge wartime industry scattered about the country was thereafter devoted to the manufacture of commercial planes; much of the remainder was reconverted to the manufacture of automobiles, refrigerators, and other products. The operation of peacetime airlines was resumed, and projects for expansion of air facilities were planned by private industry.

Victory-Through-Airpower Policy. The final stages of the defeat of Hitler gave continued emphasis to the victory-through-airpower policy of the United States and her allies. *Festung Europa* was breached and the Japanese islands opened to American occupation by a forceful application and complete coordination of land, sea, and air power. As General of the Army H. H. Arnold, who commanded the American Army Air Forces, remarked, no one service carried the war exclusively to a successful conclusion. Airpower alone cannot win a war. Nevertheless, the time-table of victory in World War II was expedited by the spectacular achievement of the Allied air forces.

Failure of the air forces of any nation to achieve their objective in modern strategy postpones victory or even invites defeat. In December and January of the winter of 1944-1945, the inability of the German *Luftwaffe* to destroy Allied air forces was largely responsible for the loss of the Battle of the Bulge. Field Marshal Goering had 2,500 fighter planes ready to cover the Ardennes offensive of General von Rundstedt. This force, however, failed to protect the Nazi ground troops, which were subject to repeated attacks from the American Air Force. The AAF bombed railheads near the front, destroyed fuel supplies and munitions, and eventually compelled the German retreat.

The complete defeat of the *Luftwaffe* began with a change in the strategy of the AAF in the last stages of the daylight bombing of industrial centers of Germany. In the winter of 1944-1945, the Thunderbolts (P-47) and Mustangs (P-51) escorting AAF bombers were instructed henceforth to divide their attention between protection of the bombers and aggressive attacks on German fighter planes. As a result, Nazi losses mounted to 1,115 in January, to 1,118 in February, and to 1,217 in March.

The continued bombing of German industrial targets crippled the war effort of the Nazi Reich. One million workers alone were used to clear away the wreckage of bombed-out factories; several millions more were constantly employed in reconstruction of factories and equipment. The dispersal of the Junkers aircraft engine factory at Magdeburg to Nordhausen, Hasserode, Lengsfeld, and Ebersbach complicated transportation and slowed down production. The attempt to remove the aviation industry to tunnels and caves brought a measure of safety at the expense of quantity of production. In February, 1945, Germany's transportation system collapsed as a result of air attack. On February 22, more than 10,000 Allied planes, based in England, France, Holland, Belgium, and Italy, struck at 200 targets on the German *Reichsbahn*. Instead of bombing at levels of 25,000 feet, the heavy bombers glided over their targets as low as 5,000 feet. Instead of flying in large formations, the bombers, many of them without fighter escort, broke up into groups and squadrons, and fanned out for the scattered targets. The *Luftwaffe* was unable to readjust itself to this change in tactics. Thus, with a loss of only a few planes, German war

production was cut in half, and traffic was reduced by 90 percent.

Both the AAF and the British Royal Air Force played conspicuous roles in the crossing of the Rhine. On March 24, troops of the First Allied Airborne Army, carried in heavily escorted transport planes and gliders, landed on the right bank of the Rhine. In one day, 14,365 men, 109 tons of ammunition, 582 tons of supplies, 695 vehicles and 113 artillery weapons were set down on the German side of the river. A fanatical attack of the *Luftwaffe*, using ramming tactics against the AAF and RAF bombers, utterly failed. On April 16, three weeks before V-E Day, General Carl A. Spaatz, commanding the U. S. Strategic Air Forces in Europe, announced the end of strategic air war. All that remained was a mopping up task.

In March, 1945, the *Luftwaffe* had resumed the night bombing of England by piloted bombers. The use of the flying bomb had persisted throughout the winter of 1944-1945 and continued until a month preceding V-E Day. But the *Vergeltungswaffe-1* (Vengeance Weapon), which had proved a dangerous menace to London in 1944, had now been largely mastered by speedy RAF and AAF fighter planes. (See AERONAUTICS in the YEAR BOOK for 1944.) Lack of territory bordering the English Channel in 1945 prevented the Nazi *Oberkommando der Wehrmacht* from continuance of an effective attack of British towns by flying bombs. Occasional attacks by the V-2 rocket bomb, which traversed the stratosphere and travelled faster than sound, were launched from considerable distances. Giant V-2 bombs scored numerous hits on London. Due to the retreat of the *Wehrmacht* from the coast of the English Channel, the greater range made the bombs less effective, and their use was discontinued in March. Beginning with the first attack on June 15, 1944, the V-1 and the V-2 had killed 8,436 persons in England and injured over 25,000. If introduced at an earlier stage of the war, these weapons might have turned the scales in favor of Hitler. Even so, Nazi V-1 bombs, directed against Antwerp in the winter of 1944-1945, greatly crippled the port facilities upon which the Allies depended for sending supplies to the Western Front.

After V-E Day, a considerable portion of the AAF and the RAF was left in the American and British zones of occupation in Germany. A large part was redeployed to the United States or sent direct to the Pacific area. In the meantime, the U. S. Strategic Bombing Survey began a comprehensive study of the effect of the Allied bomber offensive on Germany. The European war cost the AAF 79,265 casualties, including killed, wounded, missing, and captured men. The RAF lost 79,281 men. The Allies flew 1,440,000 bomber sorties and 2,680,000 fighter sorties, and dropped almost 2,700,000 tons of bombs. In 1945, the number of combat planes reached a peak of 28,000 planes, and a maximum of 1,300,000 men in combat commands. In March, 1945, the number of sorties per day set an all-time record. On June 7, 1944, during the invasion of Normandy, over 11,000 Allied planes had flown over the French coast. On March 24, 1945, over 12,000 Allied planes struck at Germany in the Rhine-Muenster area. In combat missions, the AAF lost 18,418 aircraft, and the RAF lost over 22,000 planes; while the enemy lost 32,921. Over 284,000 airborne troops were transported by the Ninth Troop Carrier Command, which also evacuated over 210,000 casualties of all services.

Air Warfare in the Pacific. Air power played an equally significant role in the Battle of the Pacific.

The B-17 (Flying Fortress) had been the principal bomber of the AAF in the European theater. The enormous distances in the Pacific, however, required a bomber with a greater range than the B-17. As a result, the celebrated B-29 (Superfortress) was developed for the assault on Japan. In October, 1943, Admiral Nimitz warned that the amphibious drive to capture island bases required for the assault on Japan would soon result in air raids on Nippon comparable to the bombardment of Nazi Germany. In June, 1944, using air bases in China, the Twentieth Bomber Command launched the first strategic attack on Japan. By November, Tokyo began to be bombed by Superfortresses based on the captured island of Saipan. The relentless retaliation upon the land of Shinto was now under way. In 1944, not more than 100 bombers attacked Japan in a single operation. But by August, 1945, over 800 Superfortresses attacked in a single night-raid. The average bomb load of 2.6 tons of explosives in November, 1944, had increased to 7.4 tons in July, 1945. During 1944-1945, the Twenty-First Bomber Command, based on the Marianas Islands, flew 90 million miles to and from the Japanese main islands with an accident loss of slightly less than one aircraft for every one million miles of flight. The percentage of aircraft lost on bombing missions dropped from a high of 5.7 percent in January, 1945, to 0.4 percent in July.

The desperate battle for Okinawa by sea and by air was waged for the purpose of establishing land bases for the final aerial assault on Japan and on Japanese shipping between Japan and Southeast Asia. It had been expected that by November, 1945, when the invasion of Kyushu was scheduled, there would be 47 groups of Army, Navy and Marine planes based on Okinawa and Ie Shima. Ultimately, Lieutenant General James Doolittle's Eighth Air Force was to include twenty groups of Superfortresses.

The contemplated amphibious assault on Kyushu never occurred. Japan sued for peace on August 10, four days after the atomic bomb struck Hiroshima, and two days after the Russian declaration of war. But it was neither the atomic bomb nor the Russian invasion of Manchuria that precipitated the defeat of Japan. The bombardment of the four main islands had been so systematic that the war effort of Nippon was almost paralyzed. In March, Major General Le May began a new method of attack, namely, bombardment with incendiaries (M-69 fire bombs) at a low level. Previously, Superfortresses bombed Japanese targets from altitudes of 24,000 or more feet. On March 9, Tokyo was attacked by 279 Superfortresses at an average altitude of only 7,050 feet. The Japanese defenders were confused, with the result that only 14 B-29s were lost. Nearly sixteen square miles of the industrial district of Tokyo was burned in the most destructive air raid of the entire war prior to the blast of the atomic bomb at Hiroshima. In a series of incendiary attacks, over 100,000 tons of bombs were dropped on Japan. In 66 cities, over 169 square miles of urban districts were burned out. The two atomic bombs, exploded over Hiroshima on August 6 and Nagasaki on August 9, completely destroyed large sections of these cities. The attacks on the 68 cities, with incendiaries and atomic bombs, resulted in the destruction of 42 percent of the urban industrial areas of Japan. The 68 devastated cities had a total population of 21 millions.

In the meanwhile, the Fourteenth Air Force under Major-General Claire L. Chennault, blasted

Japanese communications throughout China and was partly responsible for the Japanese decision in May, 1945, to give up their Greater East Asia corridor. The re-conquest of Burma and of Borneo was made possible through air attacks. After the surrender of Japan, Premier Prince Hagashi-Kuni declared that by June, 1945, when all of the major cities of Japan had been partly destroyed by incendiaries, the ability of Japan to carry on war had been disastrously undermined. In the entire Battle of the Pacific, the AAF flew over 600,000 sorties, lost 4,200 planes in combat, dropped 550,000 tons of explosives, destroyed 10,500 enemy planes, and suffered 25,000 casualties.

During the American attack on Okinawa (March-June, 1945), Japanese air forces resorted to desperate tactics that took a heavy toll of American naval vessels. In the summer of 1944, the Japanese Government had begun the recruitment of *Tokubetsu Kogeketai* or Special Attack Forces. After a rigorous training, Japanese pilots in these forces were prepared to fly their planes, heavily loaded with explosives, against warships of the enemy. The Special Attack Forces in the navy, bearing the name *Kamikaze* (Divine Wind), were truly suicide planes. The pilots carried no parachutes, and seldom escaped destruction when their planes collided with their targets. Another suicide weapon was the *Baka*, a man-driven, rocket-propelled flying bomb, borne to within a few miles of its target, and then released by its mother-plane, a medium bomber. The *Kamikaze* were used against American vessels in the Japanese defense of Leyte. The all-out attack by *Kamikaze*, however, was made in the battle for Okinawa. Here suicide planes proved a serious menace to the American navy. They crippled numerous vessels, and were chiefly responsible for the 9,731 naval casualties in the attack on Okinawa. Casualties on the *Bunker Hill* alone amounted to 656, on the *Ticonderoga* to 337, and on the *Nashville* to 323. The alertness of American carrier planes and the superior anti-aircraft gunnery on American vessels eventually triumphed over the fanatical attacks of the *Kamikaze*.

American Aircraft Production. The stupendous victories of the American Air Force could never have been accomplished without the extraordinary production of American aircraft. In 1945, which saw V-E Day on May 8 and V-J Day on September 2, American factories built nearly 50,000 planes with a total air-frame weight of nearly 700,000,000 pounds. The falling-off in production was the natural consequence of the end of hostilities. Beginning with 1939 there had been rapidly increasing

AMERICAN AIRPLANE INDUSTRY

Year	Number of Planes Built	Weight of Air- frames (lb)
1939	6,315	6,600,000
1940	12,248	20,700,000
1941	19,500	83,500,000
1942	47,836	275,949,000
1943	85,898	654,616,000
1944	96,359	952,441,000
1945 (Jan.-Sept.)	46,003	520,994,000

production until the year that victory was achieved. The greater increase came in the total weight of the air-frames as compared with the number of planes which came into mass production year after year marked the tendency toward the construction of heavier planes. Throughout the first half of the year 1945, the United States continued to supply her Allies with aircraft and aeronautical equipment under Lend-Lease agreements.

By July 1, 1945, this country had given the U.S.S.R. a total of 14,450 planes and 47,700,000 square feet of aircraft landing mats. Since the beginning of the war in 1939, Great Britain had manufactured 125,000 planes, while American lend-lease to the United Kingdom included a total of 10,000 medium bombers and fighters. Large assignments of American aircraft had also reached India and China. Production during the war had gone far beyond postwar needs. At the same time, there was a high rate of obsolescence. By September, 1945, nine out of every ten planes manufactured since the beginning of the war had become obsolescent; and there were 35,821 government-owned planes designated as surplus, representing a total cost of production of two billion dollars. Of these planes, only 8,079 found a ready sale; they brought only 19 percent of their cost of production.

The report of the Reconstruction Finance Corporation in 1945 showed that the total investment in aircraft plants during the war was \$3,448,000,000, of which 91 percent came from government contributions. Only a fraction of this amount could be recovered by the Government through the sale of surplus plants and equipment. Of about 100 aeronautical plants to be sold, by October, 1945, only six had been transferred, and only one was purchased by an aeronautical producer. As the airplane industry began to shrink back toward its prewar size, U.S. Navy plans called for a constant force of 12,000 aircraft, while Army plans called for a force of 7,500 to 12,000. These figures were much higher than the Navy and Army air forces before the war. Some aviation companies had military backlogs for hundreds of combat craft extending well into the year 1947, as well as new orders for passenger and transport planes from the airlines. But even so, the postwar aeronautical manufacture was expected to be barely a tenth of the war industry.

German and Japanese Aircraft Production. Defects in German aircraft production were partly responsible for the collapse of the *Luftwaffe*. Until the last year of the war, Allies had deemed the Nazi *Luftwaffe* as a paragon of efficient personnel and superior material. The lack of adequate performance during the Allied invasion of Normandy began to dispel this myth. Nazi Germany had begun the war in 1939 with a superiority in airpower which won phenomenal successes against small opposition. As a result, the *Luftwaffe* was tempted to postpone improvements in planes as well as tactics. When Dr. Albert Speer, Reichsminister for Armaments and War Production, took over the aviation industry in 1944, he reduced the 50 types of fighters to 38. The systematic bombardment of aviation factories by the AAF and the RAF had already begun to force changes in the construction of aircraft that produced inferior planes. For instance, the destruction of ball-bearing works caused the Daimler Benz 603 engine to be modified for sleeve bearings, making it a far less reliable motor.

COMPARISON OF AIR FORCES IN 1945 NUMBER OF COMBAT AND MILITARY TRANSPORT PLANES

United Nations		Axis Powers	
United States	68,000	Germany	24,000
Great Britain	31,000		
Soviet Russia	19,000	Japan	19,000
China	1,400		
France	800		
Total	120,200	Total	43,000

Plans for German production were continually upset by fanatical members of the Nazi Party. A project of General Galland for building 5,000 fighter planes a month in order to combat Allied bombers and to regain control of the air was opposed by Marshal Goering, who thought that despite lack of fuel Germany should have a powerful fleet of bombers for retaliation upon England. With the development of the ME-262 jet-propelled plane, the *Luftwaffe* acquired a fighter plane that was capable of annihilating the Allied bomber fleets. And yet, in unrealistic fashion, *Der Fuehrer* limited the new plane to bombing functions. As a bomber, the ME-262 accomplished little; it carried no more than a 500-kilogram bomb. Too late, in October, 1944, Hitler relented and Nazi airmen were allowed to use the ME-262 as a fighter plane. But the Germans never had these jet-propelled planes in sufficient numbers to threaten seriously American and British air power.

Japanese production of aircraft in 1945 suffered from bombardment as severely as did German production. Assaults of the American B-29s were concentrated upon such targets as the Musashina aircraft engine plant outside Tokyo, the Mitsubishi assembly plant at Nagoya, and the ball-bearing works at Kurvana. Among other set-backs, by August, 1945, the two plants that built 70 percent of the propellers for Japan's combat aircraft had been demolished.

The appalling loss of Japanese planes in combat emphasized the need for increased production of aircraft. As a result, the Koiso Cabinet, in February, 1945, proposed the nationalization of the aeronautical industry. For this purpose, a *Gunju Kosho* or Munitions Arsenal, in the Munitions Ministry, was created. But, while state control over the production of aircraft was tightened, the industry remained in private hands. Patriotic campaigns were launched among industrial laborers to increase production. Soldiers were assigned to airplane plants in order to serve as models for factory workers, spurring the workers to higher degrees of efficiency. As the American bombing increased, efforts were made to remove airplane factories underground. The scarcity of metals led to the creation of a Wooden Aircraft Production Bureau in the Munitions Ministry. By improvements in plywood, Japanese manufacturers claimed to have produced planes with wooden frames superior to the celebrated British *Mosquitoes*.

Types of American Military Aircraft. The American Air Forces acquired several new types of combat aircraft and continued the use of most of the types employed in 1944. During the year 1945 the following types of combat planes were produced. (For earlier types of warplanes, see *Aeronautics* in the *YEAR BOOKS* for 1942, 1943, and 1944).

Fighters

Curtiss P-40N (Warhawk). The basic P-40 was designed before World War II and was one of the few American fighter planes in quantity production prior to the Japanese attack on Pearl Harbor. It has since then gone through numerous type changes. Retaining the major structural features of the earlier models, the P-40N is the result of successive modifications to keep pace with military requirements. An improved Allison V-1710 liquid-cooled engine and enlarged rear vision fuselage cut-out, slightly smaller landing gear wheels and provisions for carrying auxiliary wing tanks or additional bombs are a few of the important changes. These new features, added to the rugged construction and high maneuverable qualities of the former P-40 series, make the new P-40N a versatile fighter-bomber for both offensive and defensive operation. The P-40N is a single seat, low-wing monoplane. Wings, stabilizers and vertical fin are of full cantilever design. The semi-monocoque fuselage is constructed of aluminum alloy with Alclad skin, flush riveted. Its Allison engine drives a Curtiss three-blade electrically con-

trolled multiposition constant speed propeller. Armed with six .50-inch caliber machine guns, the P-40N is also equipped with racks for carrying several bombs. It can carry a tube jettisonable launcher under each wing for 4.5 inch aircraft rockets. This latest model Warhawk has a speed which approaches 400 miles per hour. Its service ceiling is over 30,000 feet, and its range is approximately 1,000 miles. Various types of the Curtiss P-40 performed admirably in every theater of the war and ran up high box scores in China, Kiska, New Guinea, Egypt, Tunisia, France, and Germany.

Bell P-63 (Kingcobra). A heavier and more powerful version of the Bell P-39, Airacobra partly replaced the P-39 in production in 1944. The combat radius of the Bell P-63 is fifty percent greater than that of the P-39, which means that it can engage in aerial combat that much deeper in enemy territory. The P-63 has a service ceiling of 35,000 feet and a speed of nearly 400 miles an hour, compared with the 30,000 feet ceiling and 375 miles-an-hour speed of the P-39. The principal changes in the new airplane are in the power plant and low drag laminar flow wing. The new liquid-cooled V-1720 twelve-cylinder Allison engine of 1,500 horsepower with 2-stage gives higher compression through the use of a fuel supercharger geared at one speed for medium altitudes and at a higher speed for high altitude flying. In addition, it has a rating of 800 more horsepower than the Allison engine in the P-39. The wingspread of the P-63 is four feet greater than the 34 feet of the P-39. The laminar flow wing section is designed to produce minimum drag on all surfaces of the wing and thereby increase the speed of the airplane. The new P-63 was developed as the result of integration of combat performance reports on the P-39 with intense experimentation by the AAF Material Command laboratories at Wright Field in Dayton, Ohio, in conjunction with the Bell Aircraft Company at Buffalo, New York. The armament of the P-63 and the P-39 is substantially the same. Both are equipped with a .37-millimeter cannon firing through the propeller hub and four .50-inch caliber machine guns, two installed in the wings and two in the nose firing through the propeller arc. The armor includes leak-proof tanks and bullet-proof glass. The P-63, like its predecessor, has been an effective fighter in both the Pacific and European areas.

North American P-51 (Mustang). A single-seat and single-engine fighter, the original Mustang, designed and built for British use, was intended for low and medium altitude. While most aeronautical engineers in 1939 believed it impossible to design an airplane capable of accomplishing more than one type of military operation, the North American P-51 proved to be a superb low-altitude co-operational fighter, the fastest high-altitude fighter, and a versatile dive bomber. Highly maneuverable, it was prominently used by the Royal Air Force in the raid on Dieppe in 1942. Recognized as the fastest single-seat fighter with the greatest range, it then accompanied heavy bombers on the longest missions. It has a top speed of 450 miles per hour, a service ceiling of 40,000 feet, a radius of 300 miles as a fighter-bomber, and of 750 miles as an escort fighter. In the Pacific area, the Mustangs escorted Superfortresses on their devastating bombing missions over Japan and also attacked Nippon on their own from Iwo Jima and other hard-won bases. In four months of operations, P-51 fighters, based on Iwo Jima flew 6,800 sorties against Tokyo, Nagoya, Kobe, Osaka and other targets as well as escorting B-29s over Nippon. It is powered by liquid-cooled V-type Allison engine of 1,150 horsepower. Later versions have a new "teardrop" canopy affording the pilot complete vision in all directions, and added firepower, namely, six .50-inch caliber machine guns. It can carry a tube jettisonable launcher under each wing for 4.5-inch aircraft rockets.

Lockheed P-38 (Lightning). This two-engine pursuit plane in spite of much criticism as a result of its pioneering design, has proved one of the world's greatest fighters and long-range bomber escorts. Extremely versatile, it is a triple-duty warplane, serving as a long-range, high or low altitude fighter as well as bomber and as a reconnaissance craft. The distinguishing twin-booms are the result of elongation of engine nacelles in order to hold the engine oil cooler, turbo-supercharger, Prestone radiators, and landing gear. Thus, the empennage consists of two booms which form the tail cone, two vertical stabilizers, two rudders and tabs, one horizontal stabilizer and one elevator and tab. The P-38J which came into mass production in 1944 was the 36th development of the Lightning including several designs never built. In dimensions, the Lightning is unusually big for a fighter. It has a wing span of 52 feet, an over-all length of 37 feet, 10 inches, and a gross weight of 18,000 pounds. The P-38 is powered by two turbo-supercharged 12-cylinder liquid-cooled V-1710 Allison engines with a military and take-off rating of 1,520 horsepower to 27,000 feet at 3,000 revolutions per minute. There are two Curtiss electric, three-bladed, constant speed, full feathering propellers. The eighteenth version, the P-38L, shows a level speed of over 425 miles per hour, a maximum range of 3,000 miles, a climb of better than 4,000 feet a minute, a service ceiling of over 40,000 feet, and a 4,000-pound bomb capacity. It

is armed with four .50 inch caliber machine guns grouped around 20-millimeter nose cannon. The P-38 can also carry bombs of 2,000 pounds. Its prowess in combat with Focke-Wulf planes over France and Germany led the Nazi aviators to dub it the "Fork-Tailed Devil."

Republic P-47 (Thunderbolt). This single-seat, one-engine fighter, one of the famous American pursuit planes, continued its remarkable performance as a bomber escort over Europe and as a foe of Messerschmitts and Focke-Wulfs. Powered by one Pratt & Whitney Double Wasp radial air-cooled engine of 2,000 horsepower, this mid-wing monoplane has a top speed of 450 miles per hour and a ceiling of 40,000 feet. The latest models have a combat radius of 1,000 miles. Some models also have a paddle propeller that adds 400 feet a minute to the fighter's climb. Well armored, with the appearance of a milk bottle, it is one of the heaviest of the American pursuit planes, weighing over 13,500 pounds. The wing span is 40 feet, 8 inches; over-all length, 36 feet; and height, 14 feet. It is armed with eight .50-inch caliber machine guns. Frequently each wing is fitted with racks for five rocket projectiles of 4.5-inch caliber. There is front and rear armor protection for the pilot, with bullet-proof glass. Thunderbolts were conspicuously successful in harrying Nazi columns in the Italian campaign. In the Pacific, in May, 1945, P-47N fighters based on Ie Shima launched a devastating attack on Kyushu. By November 1945, the Republic Aviation Corporation had made military deliveries of 15,329 of these fighter planes.

Grumman F6F (Hellcat). This single-seat one-engine Navy fighter came into mass production in 1944 and supplemented the famous F4F (Wildcat) which had made an enviable record in the battles for Guadalcanal and in the Mediterranean and Atlantic areas. Designed to outclass the Japanese Zeros in every respect, it is powered by a Pratt & Whitney engine with a rated 2,000 horsepower, as compared with the 1,200 horsepower of the Wildcat. It has almost twice the gross weight of 6,000 pounds possessed by its predecessor; and has a speed of over 400 miles per hour and a service ceiling of over 35,000 feet, as compared with the 300 miles per hour and 30,000 feet ceiling of the Wildcat. The wing span exceeds the 28 feet of the Wildcat, while the wings can be folded for compact storage on aircraft carriers. The armament is six .50-inch caliber machine guns.

Grumman F7F (Tigercat). The Grumman F7F was, in 1945, the first twin-engine produced for the Navy. It was an American answer to improved performance of new Japanese combat planes. A big plane, almost half again as heavy as the Hellcat, the F7F has twice the power of the F6F in its two Pratt & Whitney 2800 C Double Wasp engines, each developing 2,100 horsepower. The fighter-bomber has a speed of 425 miles per hour. The F7F is equipped with tricycle landing gear which makes it comparatively easy to handle on crowded carrier decks despite the great weight of the plane. In the Pacific, the F7F was used by the Marines as a land-based plane. It was designed also for aircraft carriers.

Grumman F8F (Bearcat). The latest version of the Navy's single engine fighter is the F8F. This light-weight carrier based fighter is powered by a single stage Pratt & Whitney 2,800 C Double Wasp engine, which turns up 2,100 horsepower and can develop even 2,800 horsepower with the aid of water injection. It is 3,000 pounds lighter than the F6F. The sea level speed is 400 miles per hour. It climbs 5,000 feet a minute with the aid of water injection. Armament consists of four .50-inch caliber machine guns mounted in the wings. Although this highly maneuverable fighter reached mass production too late to see action against the Japanese, it is already in operation aboard aircraft carriers in the Pacific.

Vought F4U (Corsair). Flown by U. S. Navy and Marine Corps pilots, the Corsair carried a large share of the assault on Japanese Zeros over the Solomon Islands in 1943. As a carrier-based fighter, the Corsair made brilliant performances in the Pacific area. In 1944, the long-range striking of the Vought F4U was demonstrated by its escort of Marine SBD Dauntless dive-bombers and Army B-25 Mitchell bombers during the attacks on the Ponape Islands. In the hands of the British Royal Air Force, Corsairs provided the escort for the dive-bombers that crippled the German *Tirpitz* in 1944 at Alten Fjord in Norway. With a Pratt & Whitney air-cooled Double Wasp engine, the F4U has a speed of 400 miles per hour and a service ceiling of 35,000 feet. The three-bladed propeller revolves in an arc of 13 feet, 4 inches, in diameter. Easily recognized by its inverted gull wings, the Corsair has a wing span of 41 feet, an over-all length of 33 feet and a height of 16 feet. A later version, the F4U-1D, capable of carrying two 1,000-pound bombs came into mass production in 1944. This type is armed with the usual battery of six .50-inch caliber machine guns.

Vought F4U-4 (Corsair). In July 1945, the Navy Department released information on the latest model Corsair which had already joined the fleet in the Pacific and was in combat with Japanese airpower over Nippon. The new type, built by the Chance Vought Aircraft Division of the United Aircraft Corporation, is powered by a Pratt & Whitney Double Wasp 2800-C engine. The engine is

rated at 2100 horsepower which can be increased in combat emergencies by use of water injections. This single seat, gull-wing monoplane has a wing span of 41 feet. The wings can be folded for storage on shipboard. It has a four-bladed Hamilton Standard propeller. Its speed is over 450 miles per hour; its ceiling is over 35,000 feet; and its maximum range, over 1,500 miles. It can climb 1,000 feet per minute. Its armament consists of six .50-inch caliber guns or else four 20 mm. cannon, and eight 5-inch rockets, four under each wing. It carries a bomb load of 2,000 pounds. The pilot is protected by bullet-resistant glass. Marine fighter pilots in the new Corsair made notable records in combat over Okinawa in March-May, 1945.

Bell P-59A (Aircomet). The strict secrecy regarding the first American jet-propelled plane was lifted in September, 1944. The Aircomet, built by the Bell Aircraft Corporation, retains many of the Aircobra lines. It has a slender fuselage, a long upswept tail, a wing span of 49 feet, a length of 38 feet, and a wing area of 400 square feet. It resembles most mid-wing single-seat fighters, although lacking a propeller. Weighing over 10,000 pounds, this plane flies 500 miles per hour. The two General Electric turbo jet engines take oxygen from the air through air-intake ducts under each wing and in front of the engine. Rotary compressors or high-speed fans force the air into the combustion chamber. The air is mixed with kerosene, and combustion causes constant high pressure, forcing the gases through a turbine. Rearward, the jet engine is nozzled down for greater force by a narrow tailpipe which increases the velocity of the emerging gas to give the plane its thrust. Lack of a propeller permits the plane to stand lower to the ground, making it easier for mechanics and ground crews to work on it. It has an extended nose and tricycle landing gear. This is the first American type in mass production of a plane that is expected to revolutionize combat aircraft.

Northrop P-61 (Black Widow). In 1944, the Black Widow, the first American plane designed especially as a night fighter, came into mass production. Big as a bomber and fast as a fighter, this plane carries heavy armament of four 20-millimeter cannon under its belly and four .50-inch caliber machine guns in remote-controlled top turret. Powered by twin 2,000 horsepower Pratt & Whitney R-2800 eighteen-cylinder air-cooled engines, it has high speed. It has Curtiss electric four-bladed constant speed and full-feathering propellers. Weighing 25,000 pounds, it gives sufficient room for its crew of three specialists, namely pilot, radio operator and gunner. A twin-fuselage and twin-tail type of ship, the plane resembles an overgrown P-38 fighter. It takes off quickly, climbs sharply and has a slow landing spread for additional safety. On the battle-front it has proved an effective protection to Allied troops in night movements.

Douglas P-70 (Havoc). This twin-engine night fighter is a conversion of the A-20, with the forward compartment and bomb bays eliminated. It is an all-metal, high-wing monoplane with single tail and tricycle landing gear. The crew of two includes a pilot and a radio operator. The wings have a span of 61 feet, the length is 47 feet and the weight 19,000 pounds. The power plant consists of two Wright Cyclone R-2,600 fourteen-cylinder radial air-cooled engines of 1,700 horsepower each. With a speed of 325 miles per hour, it has a service ceiling of 25,000 feet. Armament includes four 20 mm. cannon carried in the belly.

Lockheed P-80 (Shooting Star). In August, 1945, the War Department released details regarding the latest jet-propelled fighter. The Shooting Star is a single seat, low-wing, all-metal fighter or reconnaissance plane with semi-monocoque fuselage. It is driven by a General Electric Super Jet Propulsion Turbine. Unlike conventional type engines, the G-E jet engine requires no warm-up for the take-off. The airplane is under way sixty seconds after the engine starts. Efficiency of the engine increases greatly with speed and altitude, making the Shooting Star a formidable pursuit plane. The wing span is 38 feet, and the length, 34 feet. Empty weight is 8,000 pounds and maximum operational weight is 14,000 pounds. Control surfaces of both wings and empennage are much smaller than those of conventional planes, and they total less than 45 percent of the area of the control surfaces of the Lockheed P-38. With no propeller slipstream or torque to overcome, rudder tops are eliminated. The cockpit, topped by a plastic bubble canopy and located forward of the wing in the Shooting Star's long slender nose, offers the pilot excellent visibility for maneuvers. This cockpit is pressurized from the G-E jet engine to give the pilot comfort in the stratosphere. The P-80 has a speed of nearly 600 miles per hour, and a service ceiling of over 45,000 feet. It is capable of carrying out missions assigned to conventional long-range fighter planes. Droppable auxiliary fuel tanks, mounted on inner shackles and faired into the extreme tips of the wings, furnish an extra supply of fuel. Armament includes six .50-inch caliber machine guns mounted in the nose, and two 500-pound bombs carried on wing-tip shackles. The Shooting Star is equipped with an electrical gyro-load computing type gun-sight with a reflex optical system. There are self-sealing fuel tanks, armor glass windshield, steel armor plate on

front bulkhead and behind the pilot, and dural plate aft of front of bulkhead.

Ryan FR-1 (Fireball). On September 26, 1945, the Navy Department released information regarding a revolutionary fighter plane which uses both conventional propellers and jet propulsion. It is also the first carrier-borne craft with tricycle landing gear. The conventional power plant is a 1,350 horsepower R-1820 Wright Cyclone engine which turns a three-bladed Curtiss Electric propeller. The jet propulsion is provided by a General Electric I-16 unit, modified to use the same fuel as the reciprocating engine, thus avoiding the need for dual fuel systems. The Wright Cyclone engine is housed in the nose of the FR-1, while the jet unit is found just aft the wing trailing edge. The conventional engine will drive the Fireball at a speed of 320 miles per hour, while the General Electric jet engine gives a speed of 300 miles per hour. The speed with both engines is over 400 miles per hour. The FR-1 can climb at an amazing rate. Wing span is 40 feet; and length, 32 feet. The height with folded wings is 16 feet, 9 inches. The empty weight is very low, being only 7,475 pounds. Armament includes four .50-inch machine guns, two 1,000-pound bombs, and four HVAR rockets, two being under each wing.

McDonnell FD-1 (Phantom). In 1945, the Navy developed the first exclusively jet-propelled fighter plane for operation on aircraft carriers. The FD-1, manufactured by the McDonnell Aircraft Corporation, of St. Louis, Missouri, is a single-seat interceptor, with a wing span of forty feet. The wings fold back electrically; when rigged for storage, the FD-1 is only 16 feet wide. Power is provided by twin axial-flow Westinghouse turbo-jet engines built into the wing roots. The engines, which are exclusively American design, contain no long scoops or ducts. When take-off assistance is needed, either standard carrier catapults or Jato (jet assisted take-off) units may be used. The Phantom is built of light aluminum alloy polished to a finish which offers little resistance. The speed of the interceptor is rated over 500 miles per hour. It has an amazingly high rate of climb, a service ceiling of seven miles in altitude, and a range of 1,000 miles. The Plexiglass cockpit canopy, which is located forward of the engines, resembles an elongated bubble. Armament consists of standard fighter guns or cannon mounted in the nose.

Boeing XF8B-1. This versatile low-wing single-engine monoplane fighter can be used as a bomber, torpedo plane, attack plane and interceptor. It has a speed of 375 miles per hour and a service ceiling over 30,000 feet. Armament includes six 20-millimeter cannon.

Heavy Bombers

Boeing B-17 (Flying Fortress). This renowned pioneer of four-engined heavy bombers continued in 1945 to make aviation history in every theater of the war. The first model was built as early as 1936. Originally designed and built by the Boeing Aircraft Corporation, it is now also built by Douglas and Lockheed. The B-17G version, largely employed in 1945, is powered by the usual four Wright Cyclone engines, with turbo-superchargers, each engine with a rated 1,200 horsepower. It has a normal cruising range of 3,000 miles, a top speed of over 300 miles per hour and a service ceiling of over 40,000 feet. Its empty weight is 36,000 pounds and its gross weight, 65,000 pounds. Its wing span is 103 feet, 9 inches; its length, 74 feet; and its height, 19 feet. The crew varies from six to eleven. Armor plate protects pilot, co-pilot, top gunner, tail gunner and side gunner. The *Flying Fortress* carries thirteen .50-inch caliber machine guns, eight of them arranged in pairs in four turrets (chin, top, ball and tail). Five single .50-inch caliber guns are fitted, one in the top of the radio compartment, two amidship and two in the nose section. Bomb rackage varies. The latest version includes both internal and external racks carrying a total bomb load of 6,000 pounds. After V-E Day in Europe, many units of B-17's were sent directly to the Pacific, and others were redeployed to the United States to serve for training.

Consolidated B-24 (Liberator). The Consolidated Vultee Liberator B-24 is a heavy, long-range bomber with a distinguished record. It is an all-metal, high-wing monoplane with hydraulically operated tricycle landing gear and Fowler flaps. It has a deep-bellied fuselage and a twin tail. It is powered by four Pratt & Whitney Twin Wasp R-1850 fourteen-cylinder radial air-cooled engines of 1,200 horsepower, with turbo-superchargers. The propellers are Hamilton Standard, three-bladed, constant speed, and full feathering type. The plane has a maximum range of more than 3,000 miles and a maximum speed in excess of 300 miles per hour. It has a service ceiling of over 35,000 feet. Its empty weight is 34,300 pounds and its gross weight, 60,000 pounds. Its wing span is 110 feet; its over-all length, 66 feet; and its height, 17 feet. The crew varies from nine to eleven. Five power-operated gun turrets are equipped each with two .50-inch caliber machine guns, guarding the plane from every angle. It carries a bomb load of 6,000 pounds. Armor covers all crew members in battle station from rear and front. This bomber has made outstanding records in the Pacific area, the Aleutians, North Africa, France and Germany. In

the Pacific, in 1945, B-24s made conspicuous performances in bombing Japanese oil-producing centers in Borneo.

Boeing B-29 (Superfortress). Powered by four Wright Cyclone R-3350 eighteen-cylinder radial, air-cooled turbo-supercharged engines each rated at 2,200 horsepower for take-off, nearly twice the power of the *Flying Fortress*, the B-29 was especially designed for the bombardment of Japan. A mid-wing, all metal monoplane with a tricycle landing gear, the *Superfortress* is twice the gross weight of the *Flying Fortress*. The B-29 has a wing span of 141 feet, a length of 98 feet and a height of 27 feet. The maximum weight is 135,000 pounds. The engines turn, through reduction gears, four-blade Hamilton Standard propellers with a diameter of 16 feet, 6 inches, the largest propellers in use on modern airplanes. The reduction gears, built especially for this bomber and of the lowest ratio ever used on an airplane, turn the propellers but 85/100 times as fast as the rate per minute of the engines. This immense reduction is necessary inasmuch as aerodynamic reasons require the speed of propeller tips to be below the speed of sound, and yet to utilize the maximum power of the engines. Operating through these gears, the propellers turn slower than those of any other airplane, but the speed of the propeller tips, because of their greater diameter, compares with the speed of the tips of the propellers of other planes. Each engine on the *Superfortress* has twin exhaust-driven turbo-superchargers. All moving equipment is activated either by an electric motor or cables, with the exception of the braking system which alone is hydraulic. Armament consists of power turrets with multiple .50-inch caliber machine guns. The 1945 models had 13 machine guns located as follows: two in the Sperry mid-upper turret, two in the lower turret, two in the chin turret, two in the nose, one in the radio compartment, and one on each side at waist position. A flight engineer is included in the crew of eleven members and thus the pilot's instrument board has only the flight, manifold pressure and tachometer instruments. The co-pilot's board has flight instruments and indicators for landing gear, wing flaps, and propeller governors. The navigator's station is equipped with a table, a map wheel, driftmeter, flashlight, storage space, and instrument board. There are two bomb bays, one forward of the wings, and the other aft. Inasmuch as these bays are not located at the center of gravity of the ship, an alternating system of dropping bombs is used in order to avoid changing the trim of the ship when unloading. The B-29 has three pressurized sections, namely, the pilots' control cabin in the nose, the gunners' compartment midships and the tail gunner's section. The first two pressurized sections are connected by a long tube-like tunnel, large enough to crawl through, which spans the double bomb bays of the *Superfortress* and permits access between the two sections while the plane is in flight. The tail gunner is separated from the other pressure sections by an unpressurized portion of the B-29's fuselage in the rear part of the plane. The maximum speed is over 350 miles per hour, while the landing speed is 100 miles per hour. The service ceiling is over 35,000 feet, and the maximum range over 4,000 miles. The bomb load is twelve tons. All *Superfortresses* in combat in World War II were assigned to the Twentieth Air Force, commanded by General of the Army Henry H. Arnold. The B-29s led the way in the Allied assault on Japan's homeland. The first tactical mission occurred on June 5, 1944, over Bangkok, in Burma, from China. The first mission of the B-29s over Japan was on June 15, 1944, when a group of *Superfortresses* belonging to the American Twentieth Air Force stationed in China carried out the second bombing raid on Japan, striking at the Yawata Steel Works on Kyushu. Later, Japan was bombed by *Superfortresses* from the island base at Saipan. In 1945, the B-29s based on Iwo Jima, Ie Shima, Okinawa and other islands inflicted the devastating raids on Japanese industrial cities. *Superfortresses* also carried the two atomic bombs dropped on Hiroshima and Nagasaki in August, 1945. Designed by the Boeing Aircraft Company of Seattle, the B-29s are built by this company and also the Bell Aircraft Corporation and the Glenn L. Martin Company.

Consolidated Vultee B-32. In July, 1945, the Army released data regarding its latest superbomber. Featuring heavy firepower and bomb load, the B-32 was designed for operations in the Pacific. It saw service with the Far East Air Forces of General George C. Kenney in the last months of the war. Only a trifle smaller than the *Superfortress*, the new B-32 is an all-metal, high-wing, single tail monoplane with a cylindrical semi-monocoque fuselage and a modified Davis low-drag wing with Fowler type flaps. The tricycle landing gear, which uses dual tires, is fully retractable and has a completely swiveling nose wheel. Power is supplied by four double row eighteen-cylinder Wright Cyclone engines of 2,200 horsepower, each equipped with two exhaust-driven turbo-superchargers. The Curtiss four-bladed electric propellers have a diameter of 16 feet 8 inches, and are equipped with Curtiss automatic synchronizers. Propellers on the two inboard engines have reversible pitch blades for braking during the landing run. Wing span is 135 feet; and length, 88 feet. The unusual size of the single fin of the tail gives such

stability that the B-32 can be held on course with minimum effort even though both engines on one side are cut out. The B-32 has a gross weight of 130,000 pounds as compared with the 185,000 pounds of the Superfortress. It can carry a bomb load of 15,000 pounds. Service ceiling is well over 30,000 feet. The normal crew is eight in number.

Curtiss XP-55 (Ascender). Among the experimental warplanes, the XP-55 is a pusher-type plane whose details were disclosed in 1945. Unlike the conventional plane, the power plant, propeller, and wings are mounted to the rear of the pilot, giving the XP-55 the appearance of flying backwards. Rudders are located near the ends of the swept-back wings, and the elevators are in the extreme nose—diametrically opposite to the conventional aircraft. Clustered in the nose of the XP-55, the guns are fired straight ahead and need not be synchronized to fire through the propeller. The plane is powered by a 1,275-horsepower Allison engine. The XP-55 has great speed, improved longitudinal control and maneuverability, and superior visibility and search view.

Medium, Light and Dive Bombers

North American B-25 (Mitchell). The Mitchell bomber continues to be one of the most versatile planes of the Army Air Forces. The latest B-25J version, a six-seat, twin-engine plane, has cantilever wings with a wing span of 67 feet and an overall length of 53 feet. The fuselage is a semi-monocoque structure of aluminum alloy. The tail unit has one horizontal and two vertical stabilizers. Power is furnished by two Wright Cyclone R-2600 fourteen cylinder radial air-cooled engines in semi-monocoque nacelles. The crew of pilot, co-pilot, radio operator, waist gunner and tail gunner can interchange positions in flight. The pilot's cockpit is forward of the propellers. Internal bomb storage is in the fuselage beneath the center section. A total of twelve .50-inch caliber machine guns are distributed, two in the nose, four on each side of the fuselage, two in the upper turret, two in the waist and two in the tail. The speed is over 300 miles per hour, and there is a service ceiling of 25,000 feet. The empty weight is 20,300 pounds and the gross weight over 35,000 pounds. Another version, the B-25H, holds eighteen guns, eight of them being .50-inch machine guns located in the nose. The bomb load is 4,500 pounds. Recent revisions carry tube launchers for 4.5-inch aircraft launchers. An earlier version of the Mitchell Bomber was used in Major Doolittle's historic raid on Tokyo in April, 1942. In 1945, Mitchell bombers of the Fifth Air Force, based on the Philippines dominated the Japanese ship lanes in Southeast Asia.

Martin B-26 (Marauder). The B-26C version of the Marauder retains the mid-wing monoplane design with an all-metal monocoque. Each of its two Pratt & Whitney Double Wasp 19-cylinder engines rates 2,000 horsepower. The propellers are Curtiss automatic electric, four-bladed and full feathering, with diameters of 18 feet and 6 inches. The wingspan is 71 feet; over-all length, 53 feet; and height, 21 feet. The plane has a range of 600 miles, a speed of over 300 miles per hour and a service ceiling of 20,000 feet. Its gross weight is 35,000 pounds. It has power turrets, self-sealing fuel tanks and protective armor. Its armament includes twelve .50-inch caliber machine guns, including four in the power turrets. It carries a bomb load of 4,000 pounds. Although the Marauder is a bomber, it is faster than most fighter planes of Germany in World War II. Marauders gave brilliant performance in 1945 in the bombardment of German railway centers.

Douglas A-20 (Havoc). Known to the Army Air Forces as the Havoc and to the Royal Air Force as the Boston, this Douglas attack bomber proved to be one of the most versatile warplanes in World War II. It was extensively used throughout 1945, although its manufacture ceased in 1944. It is an all metal mid-wing monoplane with a wing span of 61 feet. Two 14-cylinder 1,600 horsepower engines drive Hamilton Standard Hydromatic propellers of 11 feet, 8 inches, diameter. As a medium bomber, it is well adapted to precision bombing. As a night fighter or intruder, the interchangeable nose permits the installation of detection equipment including a powerful searchlight with which RAF Bostons pointed out and blinded the crews of enemy planes. Carrying a crew of three, and equipped with an attack nose with six .50-inch caliber machine guns, and possessed of great maneuverability, the Marauder is a formidable day-fighter.

Douglas A-26 (Invader). The Invader succeeded the Douglas A-20 as the newest and fastest all-purpose bomber of the Army Air Forces. It is designed to carry an extremely flexible selection of machine guns, cannon, bombs and fuel, making its offensive striking power adaptable to many different combat situations. A monoplane, much like the Havoc, it employs the low-draw (laminar flow) airfoil wing section. The wing span is 70 feet; the length, 51 feet; and the weight, 30,000 pounds. Equipped with twin 2,000 horsepower Pratt & Whitney R-2800 series engines, it has a new double slatted flap which reduces landing speed and assists the take-off. Rated at a speed of 350 miles per hour, this light bomber has a service ceiling of 30,000 feet. Armament consists of various combinations of .50-inch caliber guns and 20 or 37 or 75 millimeter

cannon. One version with Plexiglass nose has six .50-inch caliber guns in the nose and four .50-inch guns in the turrets. The standard attack version carries eighteen .50-inch guns. The A-26 has a crew of three.

North American A-38. This single seat light attack bomber, constructed as an all-metal, low-wing monoplane with single tail, was developed from the North American P-51 and is similar in appearance to the Messerschmitt 109E. It is equipped with bomb racks and diving brakes. The crew consists of one pilot. Wing span is 37 feet; length, 32 feet; and height, 11 feet; while the weight is 10,000 pounds. Powered by one Allison liquid-cooled V-1710 engine of 1,200 horsepower with two speeds, the plane has a Curtiss electric three-bladed propeller. The speed is over 400 miles per hour; the service ceiling, over 25,000 feet; and the tactical radius, 200 miles. The bomb load is 1,000 pounds. Armament consists of six .50-inch caliber guns, two in the nose and four in the wings.

Douglas XB-42 (Master). The latest type of medium bomber in the Army, the experimental XB-42, is a radical departure from the conventional bomber design in that it is driven by two counter-rotating Curtiss propellers located at the extreme rear of the fuselage, behind the tail surfaces. Two Allison V-type liquid-cooled engines mounted in the fuselage drive the counter-rotating propellers, thus eliminating the necessity of engine nacelles installed on the wings. This affords maximum aerodynamic effect. The bomber carries a crew of three. Pilot and gunner sit side by side in a Plexiglass canopy. The bombardier-navigator sits in the extreme nose inside a Plexiglass compartment resembling the nose of the Douglas A-26. The two engines of the XB-42 are located just aft of the pilot's compartment and are connected to the dual rotation propellers by steel drive shafts. Each propeller is independently driven and either one can be feathered when desired. Because of its radical design, the XB-42 features a special emergency procedure for bailing out. The entire propeller installation can be blown off by a detonation switch, thus eliminating the possibility of crew members tangling with the propellers. The bomber has a wing span of 70 feet, and a length of 53 feet. Its empty weight is 19,149 pounds. Fully loaded, it weighs 35,585 pounds. It can carry a bomb load 5,000 miles. The fuselage is designed to take a 4,000-pound bomb, a larger bomb than most medium bombers can carry. The speed is beyond 400 miles per hour. Armament includes several forward firing .50-inch caliber guns and several 75-mm. cannon. Wing guns mounted to fire to the rear are another unusual feature.

Douglas SBD (Dauntless). The Dauntless dive-bomber, known to the Navy as the SBD, continued its effective career, although production of this monoplane was discontinued in July, 1944. While the Dauntless is a Navy plane, it met its greatest ordeal and triumph in the autumn of 1942 when it took to the beach and operated as a shore-based bomber off Henderson Field on Guadalcanal. Here it defeated the "Tokyo Express" bearing night after night Japanese reinforcements for Guadalcanal.

Grumman TBF (Avenger). The Avenger is a carrier-based torpedo bomber that has supplanted the Douglas TBD (Devastator). This three-seat monoplane is powered by a single Wright engine of 1,700 horsepower. It has a cruising range of 1,000 miles and a top speed of over 250 miles per hour.

Navy Patrol Bombers

The Navy's patrol bombers included several land planes and flying boats. As a land plane, the Navy still used in 1945 the Vultee PBV-5 (Catalina). This type which has been in service since 1936 has been employed in many tasks from reconnaissance, through transport and ocean rescue, to torpedo bombing. The amphibious version of the PBV-5 has landing wheels retracting into the side of the hull. Powered by two 1,200 horsepower Pratt & Whitney engines, the high-winged Catalina has a wing span of 104 feet, a length of 64 feet and a height of 18 feet, with a maximum range of 4,000 miles and a gross weight of 35,000 pounds. The Vega PV-1, the Navy's version of the Vega B-34 (Ventura), remains a chief prop in the Navy's offshore anti-submarine patrol. Another competent flying-boat, the Martin PBM-5 (Mariner), manufactured by the Glenn L. Martin Company, of Baltimore, Maryland, is used as a transport plane as well as an anti-submarine patrol. Driven by two 2,000 horsepower Wright Cyclone engines, the Mariner has high-gull, full cantilever wings. The wing span is 118 feet; the length, 80 feet; the height, 27 feet. Its speed is over 200 miles per hour, range over 3,000 miles, service ceiling over 20,000 feet and gross weight, 40,000 pounds. As a patrol bomber, the Mariner carries a crew ranging from six to twelve in number. Its armament consists of heavy caliber machine guns in nose, dorsal and tail turrets and also, side gun positions. Distinctive features include its gull wings and the marked dihedral of the stabilizer. It rendered valiant service in covering the beach-heads at Saipan, Guam, the Marshall Islands, the Marianas, the Philippines, Iwo Jima and Okinawa.

Trainers and Observation Planes

The BT-18A (Valiant), built by the Consolidated Aircraft Corporation, is extensively used by the Army for

basic training. The Navy version of this two-seat trainer is the SNV-1. Powered by either a Pratt & Whitney 450 horsepower motor or a Wright 420 horsepower engine, this low-wing plane has a span of 42 feet, a length of 26 feet and a height of 9 feet, with a gross weight of 4,000 pounds. It has a service ceiling of 21,000 feet and a maximum speed at sea level of 180 miles per hour. In the North American AT-6 (Harvard), also a closed, two-seat, monoplane trainer, thousands of pilots in the air forces of the United Nations have received their advanced flying instruction. The AT-6, as well as the Navy's version SNJ, is driven by a Pratt & Whitney engine. It has a high speed of 305 miles per hour and a service ceiling of 21,500 feet. The Beech AT-10 (Wichita), a two-seat trainer, is driven by two 295 horsepower Lycoming engines with a high speed of 200 miles per hour and it has a service ceiling of 19,800 feet.

On Dec. 31, 1945, the Army released information regarding the Republic XF-12, a giant experimental photo reconnaissance plane. The wing span is 129 feet, 2 inches; and the length, 98 feet, 9 inches. Powered by four Pratt & Whitney engines, each developing 3,000 horsepower, the XF-12 is designed to operate in the upper altitudes at a speed of 400 miles per hour and a range of 4,000 miles. There are three camera stations—one vertical, one split-vertical and one tri-metrogon. The XF-12 carries radio and radar equipment, dark room apparatus for storing and loading film, and flash bombs for night photography.

Liaison Planes

Among the Liaison planes, the Army continues the use of the L-2 Grasshopper. This is a single-engine, high-wing monoplane of welded steel tube construction with fabric covers, manufactured by the Taylorcraft Aviation Corporation. The wings, of solid spruce spars, with metal ribs and fabric covered, have a total wing span of 35 feet. The weight is 1,300 pounds. Powered by a 65 horsepower Continental engine, the L-2 has a speed of 100 miles per hour and a range of 300 miles. The plane uses a two-bladed wood propeller. The crew numbers two. Grasshoppers L-3 and L-4 are also in use. The L-5 Sentinel is driven by a 185 horsepower Lycoming engine and has a speed of 125 miles per hour.

American Transports

Throughout 1945, the Army and the Navy continued the use of the following cargo and utility transports.

Douglas C-47 (Skytrain). The two-engine Douglas C-47, known in England as the Dakota, is the wartime version of the reliable DC-3, the "work-horse of the air." The C-47 is an all-metal, low-wing monoplane, with hydraulically operated landing gear and flaps. It has a normal crew of four, namely pilot, co-pilot, radio operator and aerial engineer. The wing span is 95 feet; the length, 64 feet; and the height, 17 feet; while the weight is over 29,000 pounds. Powered by two Pratt & Whitney Twin Wasp R-1830 fourteen-cylinder radial air-cooled engines of 1,200 horsepower, the C-45 uses Hamilton Standard hydromatic three-bladed propellers. The speed is over 200 miles per hour, with a service ceiling of 22,000 feet and a range of 1,500 miles. The DC-3 and its military conversion made a valiant record in flying Lend-Lease supplies over the Hump to China on the famous Burma-China air route. Another version, the C-49 (Skytrooper) was used in World War II primarily for the transport of paratroopers.

Douglas C-54 (Skymaster). The Douglas C-54, a military adaptation of the DC-4 commercial airliner, served the armed forces throughout 1945 on several transoceanic routes. This four-engine transport has a cargo capacity of a standard box-car. It is an all-metal, low-wing monoplane with single tail, and also a tricycle landing gear. It has a hydraulically operated flap and nose wheel. The crew numbers six. The wing span is 117 feet and the length, 93 feet; while the maximum weight is 60,000 pounds. Power is supplied by four 1,100 horsepower Pratt & Whitney Twin Wasp R-2000 fourteen-cylinder engines. It has a rated speed of 275 miles per hour. The service ceiling is over 20,000 feet, while the maximum range was over 3,000 miles. A specially equipped C-54 was used by President Roosevelt in travel to foreign lands, including part of the journey to the Yalta Conference in 1945.

Curtiss C-46 (Commando). This twin-engine transport is constructed as an all-metal, semi-midwing monoplane with single tail and retractable landing gear. The crew numbers three or four. Wing span is 108 feet; length, 76 feet; and the maximum weight is 50,000 pounds. The power plant consists of two Pratt & Whitney Double Wasp R-2800 eighteen-cylinder engines, each of 2,000 horsepower. Curtiss electric four-bladed propellers are used. Rated at a speed of over 250 miles per hour, the C-46 has a service ceiling of 35,000 feet and a range of 1,800 miles. This plane is extensively used as a hospital ship. Each plane has a capacity of 33 litters.

Lockheed C-49 (Constellation). A new type of transport, the Lockheed C-49, made a sensational record in the Army Transport Command. Originally designed as a luxury liner capable of crossing the United States in nine hours, in 1945 this plane was adopted for military service

and went into an accelerated production program. A low-wing, semi-monocoque plane, the Constellation is powered by four Wright Cyclone R-3850 eighteen-cylinder radial air-cooled engines, each developing 2,300 horsepower. It flies at a top speed of 340 miles per hour, with a cruising speed of over 300 miles per hour. It has a non-stop range of over 5,000 miles and a service ceiling of 35,000 feet. The wing span is 123 feet; the length, 95 feet; and the height of the vertical tail, 23 feet. There is a pressurized cabin for flight in the stratosphere. The C-49 has capacity for 64 passengers and 6 crew, or it can hold 100 paratroopers with full packs and rifles. In April, 1944, on a routine flight, a Lockheed C-49 crossed the American continent from Burbank in California to Washington, D. C., in 6 hours, 57 minutes and 51 seconds, flying 2,360 miles, at a cruising speed, using 65 percent power. In August, 1945, it broke the non-stop New York-Paris trans-Atlantic record by covering the 3,600 miles in 14 hours and 12 minutes.

Consolidated C-87 (Liberator Express). The C-87, manufactured by the Consolidated-Vultee Aircraft Corporation in San Diego, is the transport version of the famous B-24 bomber. It is a four-engine, all-metal, high-wing monoplane. Wing span is 110 feet; length, 66 feet; and weight, 50,000 pounds. Power is supplied by four Pratt & Whitney Twin Wasp R-1830, fourteen-cylinder radial air-cooled engines each of 1,200 horsepower, with turbo-superchargers. Propellers are Hamilton Standard three-bladed. The crew numbers six. With a range of 4,000 miles and a speed of 300 miles per hour, the Liberator Express carries a load of six tons. As a cargo and transport plane in the Air Transport Command, the C-87 carried key personnel and vital cargo to all theatres of the war. In 1945, C-87s joined the fleet of DC-35 in flying supplies over the Hump to China.

Fairchild C-82 (Packet). One of the spectacular developments of World War II, the Packet, possesses cargo space actually larger than most boxcars. This rectangular room of 2,870 cubic feet has rear doors for end loading. This feature eliminates the 90-degrees turn of cargo involved in side loading. It thus accommodates longer cargo. The fuselage is 54 feet long, 10 feet wide and 13 feet high. Indeed, the principal design of the Packet is to carry bulky objects without dismantling them. It will thus hold intact armored tanks, trucks and artillery. The plane is also useful in the transport of paratroopers and in towing gliders. Wing span is 106 feet; over-all length, 77 feet; and height, 28 feet. As a military plane, the crew numbers five. A crew of only two is required in the commercial plane. The empty weight is 28,000 pounds; the gross weight, 50,000 pounds. The useful load amounts to 22,000 pounds. The maximum payload for 500 miles is 18,000; for 1,000 miles is 15,000 pounds, for 1,500 miles is 13,000 pounds. The plane is powered by two Pratt & Whitney Double Wasp R-2800 eighteen-cylinder radial air-cooled engines of 2,100 horsepower. It has a cruising speed of 207 miles per hour and a service ceiling of 26,000. The maximum range is 4,000.

Boeing C-97 (Cargo Transport). The C-97 produced late in World War II, is a four-engine transport constructed as an all-metal monoplane with single tail and tricycle landing gear. It is based on the super-bomber B-29 with a two-deck fuselage. Wing span is 141 feet; length is 110 feet; and height, 15 feet. The empty weight is 70,000 pounds, and the gross weight, 120,000 pounds. Driven by four Wright Cyclone R-3350 eighteen-cylinder radial air-cooled engines of 2,200 horsepower, the C-97 has a speed of 300 miles per hour, and a maximum range of 4,000.

The Army uses several smaller utility cargo aircraft such as the UC-43 (Traveler), the UC-45 (Expediter), the UC-61 (Forwarder), and the UC-64 (Norseman). The UC-43 is a single-engine personnel carrier. This biplane, with inverse stagger, has 5-place capacity including the crew. The wing span is 84 feet. It has a speed of 200 miles per hour and a range of 1,000 miles.

In the Navy, the R4D-1 and the R4D-5 are naval versions of the Douglas DC-8, the commercial transport plane built by the Douglas Aircraft Company before the war. The R5D-1 and the R5D-2 are naval versions of the Douglas DC-4 (Skymaster). A conspicuous record in the Naval Air Transport Service was made by the Consolidated Vultee PB4Y-3R, the Navy version of the Coronado PB2Y-3, which has carried heavy loads of men and equipment over long ranges. With a wing span of 115 feet, a length of 79 feet and a gross weight of 66,000, it is the largest of the mass-produced planes in Navy service.

The largest single transport in the service of either the Army or Navy is the 70-ton Mars built by the Glenn L. Martin Company, of Baltimore, Maryland. In November, 1943, the Mars flew on its first war mission for the Naval Air Transport Service. This was a non-stop flight from Patuxent River in Maryland to Natal in Brazil. On January 28, 1944, the Mars made its first flight from Alameda, California to Pearl Harbor. The round trip was completed three days later. Thereafter, the Mars remained in regular service with the NATS in the Pacific area. In November, 1943, Secretary of the Navy Frank Knox announced that the Government had ordered twenty of these giant flying boats. The Mars has a wing span of 300 feet, a length of 117 feet, and a height of 86 feet. With

two decks, it has a normal weight of 140,000 pounds. Powered by four 2,200 horsepower Wright Cyclone R-3350 engines, the propellers have a diameter of 16 feet and 6 inches. It requires a crew of 15 men. The Mars range is 4,375 miles.

British Types. Several advances in new types of combat aircraft were made in Great Britain in 1945. Among these were the de Havilland 100 Vampire fighter. The Vampire is the first twin-boom jet fighter manufactured by any of the Allies. It is powered by a DH Goblin turbine fitted in the fuselage and outlet placed in the rear of the nacelle. Top speed is 540 miles per hour. The construction is all metal, save the cockpit which is a wood carapace structure similar to that of the justly famous Mosquito. There are long cord ailerons, a small tail assembly and high mounted elevator. Wing span is 40 feet; length is 30 feet; and height, 9 feet, 9 inches. Four 20-millimeter cannon are set low in the nose.

Details were disclosed in 1945 regarding the Gloster Meteor, the first of Allied jet-propelled planes to go into action against the Germans. It was used in 1944 over England against the Nazi Fieseler Fi-103 flying bomb, and saw service in 1945 over Germany. This plane, built by the Gloster Aircraft Company, is a low-wing monoplane of all-metal construction, with a nose-wheeled tricycle undercarriage. The power plant consists of two jet turbine Rolls-Royce Welland or Derwent units. Fuselage and wings are constructed on the unit assembly system, and the two undercarriage bays, upper and lower airbrakes and the flaps are located between the jet nacelles and the center fuselage. The high tailplane necessitated by jet propulsion, splits the rudder into two parts. The Meteor carries four 20-millimeter British Hispano cannon. The jet units are placed on the spars of the wings, each wing spar dividing each jet unit into two parts. The wing span is 43 feet; length, 41 feet; and height, 13 feet.

The Royal Air Force continued its use of Britain's celebrated day and night fighter, the Bristol Beaufighter III, which proved highly adaptable for cooperation with army forces and in assignments as a Coastal Command torpedo-bomber. A two-seat, two-engine, mid-wing cantilever, all-metal monoplane, the entire armament is under the control of the pilot. There are four 20-millimeter cannon mounted in the bottom of the fuselage, and six .303-inch machine guns in the wings. The machine guns can be replaced by extra fuel tanks, while bombs and rocket installations can be carried under the wings. The rear cockpit aft of the wing in Fighter Command versions of the Beaufighter is occupied by a radio operator who also acts as lookout. All versions of the Beaufighter retain the characteristic cantilever, two-spar, center wing, while the tail has a high rudder and wide fins. Power is furnished by two 1,650 horsepower Bristol Hercules XVII engines. Torpedo-carrying Beaufighters have a speed of about 300 miles per hour and have a precise technique of dropping torpedoes at high speed. Bristol Beaufighters saw service in almost every theatre of World War II. Rocket-firing Bristol Beaufighters made a record in attacks on German coastwise shipping in the Adriatic. In Burma, they were particularly effective in machine-gunning Akyab when occupied by the Japanese.

The Hawker Typhoon, a single-seat fighter, continued to make enviable records in destroying locomotives and trains in enemy-occupied territory. This low-wing cantilever monoplane is driven by one 2,000 horsepower Napier-Sabre IIA 24-cylinder aero-motor, and has a high speed of over 400 miles per hour. Its armament includes four 20-

millimeter cannon or else twelve .303-inch Browning machine guns. The Hawker Tempest V, a later version of the Typhoon, came into mass production in 1944. Powered by the Napier-Sabre IIB, developing 2,400 horsepower at sea level, the new version possesses a re-designed elliptical wing incorporating a thin wing section that reduces laminar flow. Other developments improve its aerobatic handling. As a result, the Hawker Tempest V proved remarkably effective in chasing and destroying by gunfire in the air the flying bombs that Germany launched against England in 1944-1945. Equipped with four 20-millimeter cannon and one 1,000-pound bomb under each wing, the Hawker-Tempest V is one of the most deadly fighter-bombers in the RAF.

The latest version of conventional fighters in 1945 was the de Havilland Hornet. This plane approaches the probable ultimate perfection of the single-seat, airscrew fighter—a type that may soon make way for jet-propelled planes. The Hornet is designed to operate from carriers. The fuselage is all-wood, carapace structure, while the wings are a composite of double upper plywood skin and underskin of alloy with composite wood and metal spars. Powered by two Rolls-Royce engines of 2,700 horsepower each, the Hornet has a speed of 470 miles per hour. The airscrews rotate in opposite directions. The Fairey Firefly I, a two-seat reconnaissance Fleet fighter, powered by a 2,000 horsepower Rolls-Royce Griffon IIB motor, continued its outstanding exploits. In 1945, the Fairey Barracuda II, a torpedo bomber, powered by a single 1,645 horsepower Rolls-Royce-Merlin 32 engine, saw service with the Royal Navy. The Supermarine Spitfire continued as one of Britain's leading fighters. Another version, Spitfire XIV, a high altitude development of Spitfire XII, is the first of this type to be equipped with the 2,000 horsepower Rolls-Royce Griffon aero-motor. In order to transmit the greater power developed by the Griffon motor in the lower density of air at high altitudes, Rotol engineers have made a new departure in airscrew design by the use for the first time of five propeller blades. The Spitfire XIV has a high speed over 400 miles per hour. The Spitfire XV, which began service in 1945, is powered by a 1,890 horsepower Rolls-Royce Griffon VI. A rocket-assisted take-off is used. Maximum speed is well over 400 miles per hour. Indeed, all of the dive-bombing Spitfires have remained faster than their Nazi rival, the Junkers JU-87. In 1945, the Blackburn Firebrand T. F. IV emerged as a shipboard single-seat fighter for the Navy. Powered by a big Bristol Centaurus radial air-cooled sleeve valve motor, the latest version of the Firebrand has a top speed of 350 miles per hour and a climb of 2,600 feet per minute.

The Avro Lancaster remained in 1945 the largest of Britain's heavy bombers in mass production. Designed for large scale night attacks on Germany, the Avro Lancaster III actually carried a bomb of 22,000 pounds during the attack on Arnberg in Germany. Powered by four 1,280 horsepower Rolls-Royce Merlin XX engines or else by four 1,600 horsepower Bristol engines, this midwing cantilever all-metal monoplane had a wingspan of 102 feet, a length of 69 feet, and a height of 20 feet. It has a speed of 300 miles per hour, a maximum range of over 3,000 miles, and a gross weight of 63,000 pounds. The Avro Lincoln B Mk II began service in the Bomber Command in September, 1945. This heavy bomber uses four Packard Merlin 68-motors. The bomb load is 22,000 pounds. Other four-engine heavy bombers include

the Vickers-Armstrong Windsor, the Handley Page Halifax VI, and the Short Stirling III. The Vickers-Armstrong Windsor is powered by four Rolls-Royce Merlin 85-motors turning Rotol four-bladed airscrews. The Halifax VI, in service with the Bomber Command in 1945, enjoys greater climb, higher ceiling and more maneuverability than earlier types. Four improved Bristol Hercules motors give a total 7,200 horsepower. Maximum speed has been increased to 212 miles per hour with a flying weight of 60,000 pounds. With a crew of six, it has a bomb load of 13,000 pounds, and an armament of one .303-inch machine gun in the nose, four in the dorsal turret, and four in the tail turret. Wing span is 104 feet, and range is 2,000 miles.

The all-wood constructed de Havilland Mosquito, manufactured in 1945 in Canada as well as Britain, continued its remarkable role as a formidable bomber in the Royal Air Force. The Mosquito XVI, a two-man crew bomber, with twin Merlin engines, carrying a 4,000 pound bomb load, boasted a 1,500 mile range at fighter speed. Since May, 1942, when a full squadron bombed Cologne, the Mosquito shared conspicuously in both the night and day bombing of Germany. Inasmuch as the Mosquito is used at high altitudes as well as for strafing, a complete system of oxygen tanks is carried. The Mosquito XVIII, armed with one one-pound cannon and four .303-inch Browning machine guns, operated with the RAF Coastal Command and scored notable successes in attacks on German submarines. Other two-engine bomber types include the Bristol Beaufort, the Bristol Blenheim IVF, the Vickers-Armstrong Warwick V, and the Westland Whirlwind. The Vickers-Armstrong Warwick V, a reconnaissance bomber, served in Southeast Asia as well as in the Coastal Command. Powered by two 2,500 horsepower Bristol Centaurus VII 18-cylinder two-row radial motors, the Warwick V has a maximum speed of 290 miles per hour. Armament includes one .50-inch caliber machine gun in the nose, one gun in each beam position, and four .303-inch Browning guns in the tail turret. The bomb load is 6,000 pounds. The wing span is 96 feet, and the flying weight is 45,000 pounds. The crew numbers seven. A good record was made by the Armstrong Whitworth Albemarle. This twin-engine, mid-wing, reconnaissance bomber possesses a tricycle landing gear and in profile resembles considerably the North American B-25 Mitchell of the United States Army Air Forces. The new bomber has been extensively used as a transport and a glider-tow.

Among the cargo-transport planes, the Avro York is a re-designed version of the celebrated bomber. While using the same high-wing engine and landing gear as the combat Avro Lancaster, the fuselage is much longer and includes triple vertical stabilizers. The plane contains four Rolls-Royce Merlin XX engines. It has capacity for 55 passengers and shows a gross weight of 63,000 pounds. With a cruising range of 300 miles per hour, and a range of 4,890 miles, it surpasses the American Douglas C-54 (Skymaster). Other British transport types include the Armstrong Whitworth Ensign, the de Havilland Flamingo, and the Armstrong Whitely V.

Among flying boats, the Short Sunderland is a military version of the celebrated commercial Short Empire. The Sunderland III is a high-wing cantilever all-metal monoplane with a wing-span of 112 feet, a length of 85 feet, and an over-all height of 32 feet. Driven by four Bristol Pegasus XVIII engines, the Sunderland III has a top speed of 210 miles per hour. It has an empty weight of 34,500

pounds and a loaded weight of 58,000 pounds. Its crew numbers eleven. In 1945, the Short Shetland, the largest British plane, received its first test. This reconnaissance and patrol flying-boat has an empty weight of 75,855 pounds and a loading weight of 135,000 pounds. Wing span is 150 feet; length, 110 feet; and height, 39 feet. With power in excess of 10,000 horsepower, the Short Shetland can take-off with a run of less than 500 yards. It is driven by four 2,500 horsepower Bristol Centaurus air-cooled eighteen-cylinder sleeve-valve two-row radial motors. Maximum speed is 267 miles per hour at 4,000 feet.

Russian Types. Secrecy continues to veil many of the improvements in Russian aviation. In 1945, almost a fifth of the planes operated by the Red-Air Forces were Lend-Lease imports from the United States and Great Britain. American planes, like the Bell P-39 (Airacobra), are operated in Soviet Russia with practically the same parts as those used in the American Army Air Forces, the only difference often being that the American insignia are replaced by the Red Star. Russian aircraft production in 1945 was concentrated upon a number of well-tested planes. Among the fighters, the Yak-9 and the La-5 have had top production. The Yak-9 resembles the British Spitfire. It uses the same well-known in-line, single 1,100 horsepower, Vee twelve-cylinder liquid-cooled M-105 engine, as well as the long, slender fuselage, retractable landing gear and air-intake beneath the fuselage as in the earlier planes designed by the engineer Yakovlev. The wing span is 36 feet, and the length is 30 feet. The high speed is 345 miles per hour. Like most Russian fighters, the Yak-9 consists of considerable wood construction, although less wood than in the majority of fighters. The Yak-9 has wooden wing covering and ribs, steel and duralumin spars, a steel tube fuselage, and duralumin tail surfaces. Gross weight is 6,000 pounds. The La-5, designed by the engineer S. A. Lavochkin, unlike most Russian fighters, uses a 1,600 horsepower radial, air-cooled engine. Resembling the all-wood Lagg-3, this fighter has a wing span of 31 feet and a length of 28 feet. Its top speed is 370 miles per hour.

Among the heavy bombers, the TB-7 takes a prominent place. As a development of the TB-6, the new version is driven by four 1,300 horsepower liquid-cooled AM-38 engines. Gross weight is 49,280 pounds. Top speed is 280 miles per hour, and its service ceiling is 25,000 feet. The crew numbers eleven.

The PE-2, an Ilyuchin design, resembles the German Messerschmitt Me-110. It has a wing span of 60 feet, a length of 45 feet and a height of 13 feet. Powered by two 1,300 horsepower M-105 twelve-cylinder Vee-type liquid-cooled engines, it shows a high speed of 310 miles per hour. This three-place light bomber is designed for low-level attack. The bombardier lies prone in the nose beneath the pilot and the rear gunner sits in the pilot's canopy, thus placing all the crew ahead of the wings. Most cherished of all Russian planes, because of the fact that it has no American or European counterpart, is the Stormovik. The Il-3 version, a two-seat assault bomber, has a wing span of 49 feet, a length of 38 feet and a height of 10 feet. Powered by one 1,300 horsepower Toupolev engine, it claims a high speed of 280 miles per hour. Although relatively slow and not highly maneuverable, the Stormovik continued in 1945 its outstanding record in low-level attacks against the German *Wehrmacht*. The pilot's cockpit is a raised canopy above the wing, while there is a partly

open cockpit for the rear gunner. The Stormovik carries either four 250-pound rocket bombs or else one 1000-pound bomb. Its armament includes two 32-millimeter wing-mounted cannon and four .50-inch caliber machine guns.

Many of the Russian cargo-transporters are but versions of the American Douglas DC. The L-760, however, is an ambitious Toupelev design. With a wing span of 120 feet, its wing span exceeds that of the American Mars. Powered with six 1,100 horsepower Hispano-Suiza type M-100 engines, the L-760 has attained a high speed of 185 miles per hour, and a range of 1,860 miles. With a gross weight of 103,000 pounds, it has a 64 passenger capacity.

French Types. With the liberation of France from Nazi slavery, the revival of French aeronautics occurred. The first French prototype to fly after the Allied expulsion of the Germans was a new French transport plane, the S. O. 30 Bellatrix. It mounts two Gnome et Rhône 1,260 horsepower supercharged motors which give a cruising speed of 240 miles per hour. It has capacity for 22 soldiers and their equipment, and has a range of 1,240 miles. The large Latécoere 631 six-engine flying boat, which was dismantled and hidden during the German occupation of France, was re-assembled. In March, 1945, it made its first test flight. The Bloch 181, a four-engine, low-wing monoplane, is now in service on French civil air lines. It is driven by four 1,050 horsepower Gnome et Rhône N-38 and N-39 motors, giving the plane a maximum speed of 267 miles per hour. The wing span is 96 feet and the loaded weight 37,600 pounds. The Bloch 181 carries 33 passengers and 20 by night.

German Types. One of the most sensational developments of the year 1945 was the mass production of the German jet-propelled fighter Messerschmitt Me-262. Due to a bungling project of Hitler, the Me-262 was limited at first to bombing. When the Me-262 was finally produced as a fighting plane, the Allies were already at the Rhine and even the new paragon could not stop them. The plane had astonishing speed, well over 580 miles per hour or over one mile in six seconds. American pilots, in conventional planes had the sensation of standing still when a Me-262 shot by them. The Me 262H-4 version was powered by two Junkers Jumo 004 B-4 turbo jet units, each with static thrust at sea level of 1,980 pounds. It had a wing span of 41 feet, a length of 34 feet and a loaded weight of 13,450 pounds. It had a climb of 4,700 feet per minute and a service ceiling of 20,000 feet. The Me-262, a low-wing cantilever monoplane, was armed with four 30-millimeter MK-108 cannon mounted in the nose; it carried bombs under the wings. A new feature was a device whereby the cockpit canopy, pilot's seat and pilot could be catapulted clear of the plane when necessary to bail out. The Me-163 was a much smaller plane than the Me-262. With swept-back wings, no horizontal tail surfaces, and a device for dropping the landing gear after the take-off, the Me-163 reached a top speed well over 500 miles per hour. Another jet propelled plane, the Heinkel He-280, had elliptical wings with pointed tips, typical of Heinkel designs. The wing span was about 40 feet. Powered by two Junkers Jumo jet-propulsion units, the He-280 did not attain the speed of its Messerschmitt compatriot. The Heinkel He 162A-1, known as the *Volksjäger* (People's Fighter) was also a jet plane. It came into service only toward the end of the war. Fitted with one Jumo 004 Heinkel-Hirth turbo-jet, this small fighter, having a weight of only 4,820 pounds, reached a top speed of 522

miles per hour. Its armament consisted of two Mk 108 30-millimeter guns or two MG 151 20-millimeter cannon. Its duration was only twenty minutes at sea level or a range of only 135 miles, too short to be of great operational value. It was the first German plane to employ a pilot ejection seat. In 1945, the Messerschmitt Me-410 completely replaced the Me-210 in service on all fronts of *Festung Europa*. The wing span of this low-wing cantilever monoplane was 53 feet, and the length, 40 feet. Powered by two 1,721 horsepower Daimler-Benz DB603 twelve-cylinder Vee liquid-cooled engines, the Me-410 achieved a maximum speed of 390 miles per hour. Its armament consisted of two 7.9-millimeter MG17 machine guns and two 20-millimeter cannon in the nose of the fuselage and fired by the pilot. There were two 18-millimeter MG131 guns in faired blisters, one on each side of the fuselage, remotely sighted and controlled by the rear gunner. A contact-breaker device interrupted firing when the guns, which were electrically fired, pointed at any part of the airplane's structure. The bomb compartment was in the nose of the fuselage beneath the pilot's cockpit and carried either two 550-pound bombs or else one 1,100-pound bomb. In place of this internal load, however, the Me-410 possessed an external carrier beneath the fuselage capable of supporting a 2,200-pound bomb.

The latest development of the Focke-Wulf was the Fw 190D, which went into operational service in the *Luftwaffe* in the year 1945. This single-seated, one-engine fighter had a wing span of 34 feet 6 inches, an over-all length of 33 feet, and a height of 12 feet. It had a gross normal weight of 8,600 pounds and a gross maximum weight of 10,350 pounds. Powered with a single Junkers Jumo 213 engine, the Focke-Wulf 190D showed a maximum speed of 450 miles per hour. The electrical system of the Fw 190 was complicated by the fact that four of the six guns, namely the two 7.92-millimeter machine guns in the top cowlings and the two inboard 20-millimeter Mauser cannon, must be synchronized to fire through the airscrew. The synchronizing units were mounted behind the engine. In addition, the Fw-190 carried two 20-millimeter Oerlikon cannon outboard in each wing. All of the versions of the Focke-Wulf Fw-190, like many German planes, made extensive use of ball-bearing equipment which was found throughout the complicated differential bell cranks as well as wherever moving parts were joined and in all the electric reduction gears and motors. Another development used on the western front was the Focke-Wulf Fw-191, the Moskito. This was a two-engined monoplane, designed as a fighter and light bomber. The Focke-Wulf Ta152, designed by Professor Kurt Tank, was fitted with a Jumo 213E engine which gave this new jet fighter a speed of 425 miles per hour at an altitude of 35,000 feet and 472 miles per hour at an altitude of 41,000 feet. A new multi-purpose plane was the Dornier Do 335T. This fighter plane was propelled by two airscrews, one in the front and one in the rear. The power plant was two 1,700 horsepower Mercedes-Benz DB 603 motors. The wing span was 47 feet and the weight, 23,600 pounds. With a maximum speed of 472 miles per hour at an altitude of 21,000 feet, it was the fastest German airscrew propelled plane.

Among the two-engined heavy bombers the prevailing types included the Dornier Do-2172, the Heinkel He-177 and the Junkers Ju-88A4. The four-engined heavy bombers included the Heinkel He-274 and the Focke-Wulf Fw-200 C. The most

unusual feature of the He-177, known as *Der Greif* (the Griffin), was the use of two double engine units, each unit driving one four-bladed tractor airscrew. In other words, each power plant assembly consisted of two Daimler-Benz DB605 liquid-cooled inverted Vee twelve-cylinder motors mounted side by side and geared together. The Focke-Wulf Fw-200C was a militarized version of the famous Kurier or Condor which played a conspicuous role in German commercial aviation before World War II. Fitted with four 940 horsepower Bramo-Fafnir radial air-cooled engines, the Fw-200C had a top speed of 250 miles per hour. The bomb bay lay beneath the fuselage, while external bomb racks were attached under the wings beyond the outboard nacelles. The normal bomb load was 3,300 pounds. The Fw-200C served in long-range overseas reconnaissance, mine-laying and convoy attack.

The Arado Ar 234B-2 was another jet-propelled plane used for reconnaissance and bombing toward the end of the War. Powered by two Jumo 004 B-4 Turbo-jets, this 20,000-pound plane had a speed of 470 miles per hour at an altitude of 19,000 feet. A newer development with four BMW 003 turbo-jets had a speed of 540 miles per hour at 20,000 feet, with a climb of 3,600 feet per minute at sea level.

Among the cargo transports, the Junkers Ju-52 was still widely employed for troop transportation. Powered by three 760 horsepower BMW engines, this military conversion of a commercial plane had a wingspan of 95 feet, a length of 62 feet and a height of 14 feet. It had a top speed of 189 miles per hour and a range of 1,000 miles. Small indeed was this plane in comparison with the Messerschmitt Me-323. This monster troop transport had a wingspan of 181 feet, a length of 93 feet and a height of 24 feet. Six 750 horsepower Gnome-Rhône engines were carried on the high wings. The Me-323 had a maximum speed of 170 miles per hour and a range of 500 miles. With a gross weight of 65,000 pounds, it had capacity for a 22,000 pound cargo or 130 troops. The loss of 37 of these gigantic ships in the Nazi evacuation of Tunis in 1943 gave this type a poor start. A later transport was the Messerschmitt Me-243. Powered by four 1,700 horsepower Mercedes-Benz DB-603 liquid-cooled inverted Vee in-line motors, the Me-243 could serve as both a bomber and a transport. The Junkers Ju-90, with a characteristic swept-back wing, powered by four 1,600-horsepower BMW engines, had a gross weight of 55,000 pounds. A later version was the Junkers Ju-290, powered by four 1,000 horsepower Bramo-Fafnir engines. A still heavier plane was the Blohm & Voss Bv-222, powered by four 1,000 horsepower BMW engines and having a gross weight of 100,000 pounds. New developments included the four-motor Heinkel He-274. Finally, the Focke-Wulf Fw-200B, converted from the distinguished commercial Condor, offered excellent military transport service. As a troop-carrier, the Fw-200B had accommodation for thirty fully armed men. In 1945, the Arado Ar 232 appeared as a prototype. This high wing cargo plane was driven by two 1,600-horsepower BMW radial motors. The new plane could carry a load of 6,000 pounds.

Japanese Types. By 1945, the revision of Japanese aircraft design, which had begun in 1942, had greatly increased the striking power of the Japanese air forces. Japanese planes were now better armored, contained self-sealing tanks and carried heavier gun batteries. These improvements, however, failed to keep pace with the extensive de-

velopment of American planes. This inferiority partly accounted for the fact that Japan lost a total of 51,109 airplanes during the war and had only 15,886 planes at the time of surrender.

Conspicuous among the new Army fighters of Japan in 1945 was the Nakajima Ki84 Type 4, called by American pilots, the Frank I. This low wing monoplane was fitted with a 2,000 horsepower Nakajima Ha45 eighteen-cylinder radial motor and an electrically operated four-blade propeller. It had a top speed of 420 miles per hour at an altitude of 20,000 feet. It could climb at the rate of 5,000 feet per hour and had a service ceiling of 35,000 feet. Armament included two 20-millimeter cannon, mounted in the wings and two 12.7-millimeter machine guns on the cowl. The pilot was protected by effective armor. A bomb or fuel tank could be carried beneath each wing. Nick I, the Kawasaki Type 2Ki 45, was widely used on all battlefronts in 1945 by the Japanese Army as a day-and-night fighter. Its power plant consisted of two 1,020 horsepower Nakajima Type 2 radial motors which gave the plane a maximum speed of 351 miles per hour at an altitude of 17,600 feet. Armament included one 37-millimeter cannon under the starboard fuselage and three machine guns. Two 550 pound bombs could also be carried. The G4M4 or Betty 24 was a later version of the Mitsubishi Type 1 land-attack airplane. It was fitted with two 1,900 horsepower Kasei 25 radial motors. The year 1945 also saw considerable use of Jill 12, the Nakajima B6N12 which replaced the older Kate (Jill 11). Called *Tenzan* (Heavenly Mountain) by the Japanese, this three-seat carrier-borne attack plane was used for reconnaissance and torpedo bombing. Powered by a 1,900 horsepower Kasei 25-cylinder radial motor driving a four-bladed propeller, the Jill 12 had a maximum speed of 310 miles per hour at an altitude of 19,000 feet.

George II was a barrel-shaped mid-wing land-based navy fighter, resembling the American Republic Thunderbolt. It was powered by a 2,000 horsepower Homare 21 engine turning a four-bladed electric propeller. The engine was fitted with water injection device with an ejector without exhaust stacks. Maximum speed was over 400 miles per hour. Wing span was 39 feet and length, 29 feet. Its heavy armament included four 20-millimeter cannon in the wings and two 12.7-millimeter nose machine guns. The Japanese name for this plane was *Shiden* (Violet Lightning).

Kawanishi Norm II was a two-seat single-float seaplane used for reconnaissance. The Japanese name was *Shun* (Painted Cloud). This all-metal craft had a wing span of 46 feet and a length of 37 feet. Powered by a 1,720 horsepower Mitsubishi Kasei 24 radial engine, the Norm II had several new features including a contra-rotating propeller and a large stream-lined spinner covering the entire front of the engine cowl. The Norm also had ejector-type exhaust stacks and large wide-cord flaps. The wing floats were fully retractable.

The Kawanishi Rex II was a single-seat single-float fighter, called by the Japanese *Kyofu* (Mighty Wind). Powered by a 2,000 horsepower Nakajima Homare eighteen-cylinder radial engine, the Rex had a top speed of 400 miles per hour. Wing floats were retractable but did not fold flush with the wing's undersurface as on the Norm. The span was 40 feet and the length, 35 feet. Judy 33 was the latest model of the standard carrier based bomber. Its new power plant was a Mitsubishi Kinsei 62 radial engine. The wing span was 38 feet and the length, 34 feet. Retractable spoiler type dive

flaps were fitted to the undersurfaces of the wings. Top speed was 300 miles per hour. The crew number two.

A new reconnaissance bomber was the Peggy I. Powered by two radial engines, this plane had full feathering propellers. Wing span was 74 feet and length, 61 feet. The top speed was 345 miles per hour at an altitude of 20,000 feet. In one version of this mid-wing plane, a plywood-covered nose and tail cone fitted with radar was used for reconnaissance and search. Another version had conventional transparent nose and tail piece for bombing operations. The craft had a hydraulically operated power turret with a 20-millimeter cannon and waist blister with machine guns. Superseding the Mitsubishi Sally, the Nakajima Type 100 Model 2, called by Americans "Helen" was a seven-seat medium bomber, with a maximum speed of 299 miles per hour at an elevation of 19,700 feet.

American Commercial Types. The end of the hostilities of World War II brought emphasis upon new American commercial aircraft as distinct from Army transport planes. Commercial transports in 1945 were divided into two categories, namely: (1) four-motored long-range planes carrying 44 or more passengers and making stops not oftener than every 500 miles, and (2) twin-engined short-range transports with a seating capacity under 44 passengers, designed for economical operations at station intervals of 100 to 500 miles. In addition to these basic categories there were two special types of commercial planes, namely: (1) small single or twin-motored airplanes for feeder line operation, and (2) giant flying boats for trans-oceanic flights.

One of the outstanding civilian models is the Douglas DC-4, the commercial version of Army C-54 (Skymaster). This low-wing monoplane carries 44 passengers and a crew of five. It has a wing span of 117 feet, a length of 93, and an over-all height of 27. Powered by four Pratt & Whitney 2SD1-G engines, the Skymaster has a cruising speed of 252 miles per hour at an altitude of 23,000 feet, with a range of 4,240 miles. It has a gross take-off weight of 73,000 pounds. The DC-6 is a more luxurious airliner. Carrying a crew of five, it is designed to transport 52 passengers as a day plane and 26 berth passengers by night. It has a wing span of 117 feet, a length of 100, and a height of 28. Four Pratt & Whitney 2SC14-G engines drive Curtiss electric reversible propellers, 13 feet in diameter. The cruising speed is 315 miles per hour at an altitude of 24,000 feet with a load of 71,000 pounds. The maximum take off load is 91,200 pounds; while the maximum range is 4,100 miles. The Douglas DC-7 is in process of construction. This super-transport is the commercial version of the mammoth C-74 (Globemaster) delivered to the Army in 1945. With a crew of thirteen, it carries 96 passengers. The Globemaster has a wing span of 173 feet, a length of 124, and an over-all height of 43. Its gross weight is 162,000 pounds and the payload is 31 tons. The Globemaster is powered by four 3,000 horsepower R-4360 Pratt & Whitney Wasp Major engines, turning four-bladed Curtiss electric reversible propellers. A new development is the combination aileron and flap arrangement which keeps landing speeds below 95 miles per hour. This luxury airliner claims a long-range cruising speed of 285 miles per hour at an altitude of 20,000 feet. The maximum range is 7,800 miles. Twenty-six of these were ordered by the Pan American World Airways for their global routes.

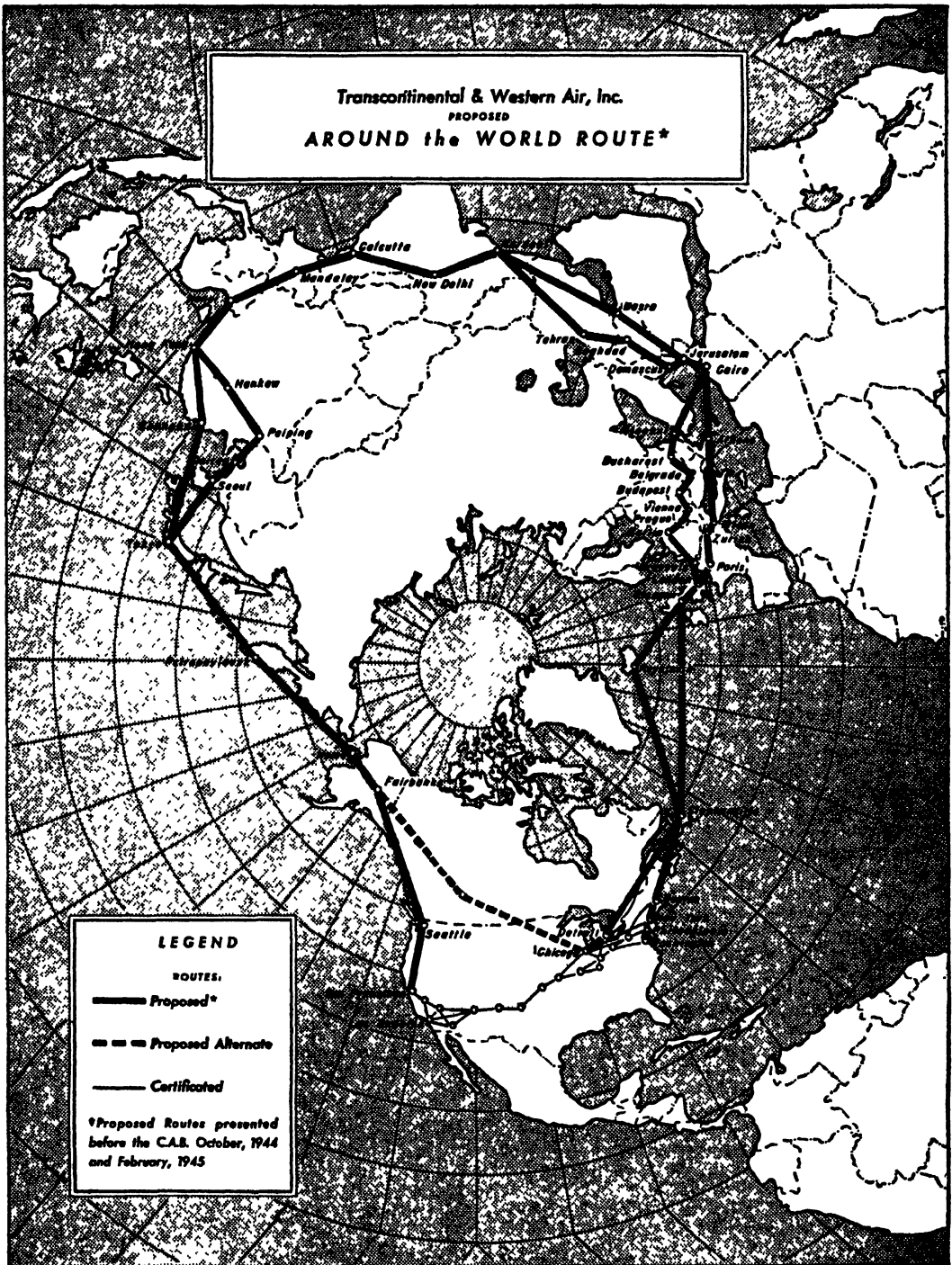
One of the outstanding developments of 1945

was the Boeing 377 (Stratocruiser), the commercial counterpart of the Boeing C-97, which in turn is the military transport version of the Superfortress. This new four-engine, low-wing, two-deck, pressurized cabin, passenger plane has a wingspan of 141 feet, a length of 110, and an over-all height of 38. With a gross weight of 135,000 pounds, the plane is powered by four Pratt & Whitney R-4360 Wasp Major engines of 3,500 horsepower each at the take-off. It has a cruising speed of 340 miles per hour, a range of 4,200 miles and an operating altitude of 30,000 feet. The three-bladed propellers are 16 feet and 6 inches in diameter. The crew is 5 to 7 in number. The Stratocruiser carries 114 passengers in seats, or 60 in berths. Pan American World Airways purchased 20 Stratocruisers for nonstop flights between New York and London in 11½ hours.

Another contestant among the long-range giant airliners is the Lockheed Constellation. This all-metal, low-wing monoplane carries 64 passengers and a crew of five. The power plant is four Wright Cyclones, each of 2,200 horsepower, which drive Hamilton Standard super-hydromatic propellers, 15 feet in diameter. Developing a top speed of 350 miles per hour with full load, the Constellation has a cruising speed of 310 miles per hour, a nonstop range of over 5,000 miles and a service ceiling of over 25,000 feet. It has a maximum take off gross weight of 100,000 pounds and a payload of 24 tons. The wing span is 123 feet; the length, 95, the over-all height, 23. A pressurized cabin maintains an 8,000-foot atmosphere at a 20,000-foot altitude. Its nonstop flights from New York to London and from Los Angeles to Honolulu have given outstanding performance, for its ability to cruise "above the weather" permits the avoidance of most storms. It is used on numerous airlines including the American Export Airlines, the Eastern Airlines, the French Government Airlines, KLM Royal Dutch Airlines, KNILM Royal Netherlands Indies Airlines, Pan American World Airways, Pan American Grace Airways and Transcontinental and Western Air.

The Fairchild C-82 Packet is a new development in the way of air freight. This giant plane offers 2,870 cubic feet of space, actually greater than many railroad boxcars. Moreover, a provision for end-loading eliminates the 90-degree turn involved in side loading and thus accommodates a longer cargo than the conventional transport plane. The empty weight of the C-82 is 28,000 pounds, and the useful load, 22,000 pounds. The maximum payload for 500 miles is 18,000 pounds; for 1,000 miles, 15,500; and for 1,500 miles, 13,000. Power-plant includes two Pratt & Whitney R-2800C twin-row radial air-cooled engines, each of 2,100 horsepower at the take-off. Cruising speed is 200 miles per hour and maximum range 4,000 miles. The fuselage of the Packet is 54 feet long, 10 wide and 13 high. One engine is mounted in each wing. Aft of each engine a boom extends to the tail, composed of a cross piece and two rudders.

In the field of short-range carriers, the Martin 202 has set a high standard. This all-metal, low-wing monoplane has a passenger capacity of 30, a crew of 5 and a useful load of 10,976 pounds. It gives fast and low-cost travel over ranges of 100 to 700 miles where larger four-engined transports cannot be operated with profit. With a wing span of 92 feet, this luxury airliner is powered by two Pratt & Whitney WR-2800-2SC15C engines each with 2,400 horsepower in the take-off. The cruising speed is 270 miles per hour and the top speed, 306.



THE FIRST PROPOSED AROUND-THE-WORLD ROUTE

The maximum operational ceiling is 30,000 feet. Another recent type is the Douglas DC-8, designed as a replacement for the well-known DC-3. This low-wing monoplane, grossing 39,500 pounds, carries a useful load of 15,585 pounds and accommodates 38 to 48 passengers. The wing span is 110 feet; the length, 77; the over-all height, 25. The

distinctive feature is the location of the two propellers in tandem fashion behind the rudder. These propellers, fifteen feet in diameter, are powered by two Allison V-1710 engines of 1,600 horsepower. The maximum cruising speed is 270 miles per hour. The operating cost per-passenger-mile is one-half that of the DC-3.

Among flying boats, the Mars, built by the Glenn L. Martin Company for the Navy, has remained the world's largest aircraft of this character. This is a 72-ton plane with a wing span of 200 feet. Its records include the longest nonstop flight, from Patuxent, Maryland, to Natal in Brazil, a hop of 4,475 miles. It has lifted the heaviest load ever carried by an airplane, 148,500 pounds, at the take-off, and has carried the heaviest payload on the longest flight, namely, 35,000 pounds between Pearl Harbor and Alameda, California, a distance of 2,500 miles.

British Commercial Types. The year saw the completion of the Avro Lancaster G-AGLF, a luxury airliner in extensive use on long routes by the British Overseas Airways and the Trans-Canadian Air Lines. With a wing span of 102 feet, a length of 76 and an over-all height of 19, the Avro Lancaster has a gross weight of 65,000 pounds. The crew numbers five, while the plane is equipped with berths for nine passengers. The most economical cruising speed is 200 miles per hour, using 575 horsepower from each of the 1,250 horsepower Rolls-Royce Merlin motors at an altitude of 15,000 feet. High-speed cruising reaches 265 miles per hour. The Lancaster has seats facing sideways with passengers looking toward windows on the sides of the cabin. The Avro York I, a four-engined airliner with a wing span of 102 feet, is designed for 24 passengers and a crew of four. With a high speed around 300 miles per hour, it has a range of 3,000 miles. The Avro Tudor, which took to the air in 1945, is Britain's first pressurized airliner. With a wing span of 120 feet, the Avro 688 is powered by four 1,850 horsepower Merlin engines. The maximum speed is 346 miles and the normal cruising speed, 300. The range is 4,890 miles. The maximum take-off gross weight is 76,000 pounds. The crew is five and the passengers with sleeping accommodations are twelve in number. Seats in this luxury liner are grouped into compartments. Equipment includes a kitchen and a steward's pantry.

The Airspeed Ambassador AS-57, designed to replace the Douglas DC-3 on British airways, has a pressurized cabin with seats for 36 passengers. It operates over stage distances of 200 to 800 miles; and, with only 25 passengers, over distances of 1,300. Its wing span is 115 feet; length 80; over-all height 19. Power is supplied by two Centaurus-57 engines. Cruising speed is 210 miles. Another new airliner, the Miles M-56, carries 24 passengers. Wing span 80 feet, length 66. Powered by two Rolls-Royce Merlin engines, the Miles M-56 has a cruising speed of 226 miles, and a range of 1,600. The Vickers-Armstrong VC-1 Viking is another 21 to 27 passenger airliner developed to replace the Douglas DC-3. In the larger group of airliners, the Bristol 167 is under development as a 100-ton passenger plane designed for trans-Atlantic work.

The largest British plane to take to the air was the Short S-35 Shetland. This flying boat, as a civilian plane, holds 70 passengers. With a wing span of 150 feet and a length of 110, it has an over-all height of 39. Having an empty weight of 75,855 pounds, it can carry a gross weight of 130,000. The payload is 7,620 pounds for a flight of 4,650 miles; 22,000 pounds for 3,000 miles; and 30,025 pounds for 2,076. The maximum speed is 267 miles at an altitude of 4,000 feet. The plane is propelled by four 2,500 horsepower Bristol Centaurus air-cooled eighteen-cylinder sleeve-valve two-row radial motors.

Helicopters. The year saw several developments in the helicopter, the flying machine in which the lifting force is the upward pull of one or more propellers revolving horizontally. The only helicopters produced in quantity are the Sikorsky R-4, the R-5 and the R-6. The R-5 is powered by a Pratt & Whitney R-985 Wasp Junior engine of 450 horsepower. The R-6 has a Franklin 230 horsepower engine. On the battle front in World War II, the Sikorsky R-4 proved effective in carrying serum and medicine to isolated ships and outposts, and in rescuing American wounded soldiers in the jungle.

The A-3, produced in 1945 by the Aeronautical Products Company, of Detroit, Michigan, is a single-rotor ship similar in appearance to a conventional light plane, except that the propeller is above the cabin and revolves horizontally. The power plant is a Franklin 6-cylinder air-cooled engine.

Flight tests of the PV-3 Helicopter in 1945 proved its serviceability to fulfill Coast Guard and Navy air-sea rescue. The PV-3, manufactured by the P-V Engineering Forum, is powered by a single Continental-Wright R-975 engine with a rating of 450 horsepower at the take off. The engine is entirely closed and furnishes power to each of the rotors (propellers) at each end of the fuselage which is 48 feet long and 13 feet high. The unique feature of the design is the tandem arrangement of the rotors, each propeller rotating in opposite direction in order to eliminate torque effects. The pilot's cabin is almost under the forward rotor, passenger quarters directly behind the pilot. Gross weight of the PV-3 is 6,500 pounds. The plane can land within a circle of 100 feet diameter.

Air Transport Command. The Air Transport Command, operating under the U. S. Army Air Forces, continued its extensive service even after V-J Day. In September it was operating a total of 2,860 major transport planes, a fleet eight times the size of all the domestic airlines in the United States. Its air routes covered every continent of the globe and crossed every ocean. Chief among these transports were the Curtiss C-46 (Commando), the Douglas C-47 (Skytrain), the C-54 (Skymaster), the Lockheed C-69 (Constellation), the Fairchild C-82 (Packet), the Boeing C-97 and the Consolidated C-87. The North Atlantic routes of the ATC originated at New York, Washington, Stephenville in Newfoundland and Goose Bay in Labrador. The principal European terminus was Prestwick in Scotland. Other terminals were Paris and Casablanca by way of the Azores. In speeding the war effort and demobilization, this global military airline carried almost 4,000,000 passengers, of which more than 325,000 were sick and wounded. The corresponding service for the Navy is the Naval Air Transport Command.

Domestic Air Carriers. On Oct. 17, 1945, Army priorities on all civil air transportation, except across the Pacific Ocean, were lifted. Passengers with tickets no longer had to fear being "bumped" off a plane before reaching their destination. Although the domestic air lines were supplied with numerous C-54s which had been declared surplus by the Army, these public carriers were still unable to meet the heavy demand for air travel. Pending the delivery of new commercial planes and the expansion of schedules, airliners made capacity flights on almost all routes.

The heavy increase in air travel after V-J Day is not reflected in statistics for the year, inasmuch as the U. S. Civil Aeronautics Board follows the fiscal year of the U. S. Government which begins

on the first of July. In the year of June 30, 1944, to June 30, 1945, when the airlines were still under contract to the Army, all domestic air mail carriers flew a total of 186,244,384 miles as compared to 120,996,373 miles in 1944. Of these, 179,703,872 were revenue miles flown in 1945 and 117,389,242 revenue miles in 1944.

The number of revenue passengers carried was 5,137,877, compared with 3,309,696 in 1944. The average length of journey was 550.9 miles against 554.5. The pounds of mail carried were 184,520,818—132,439,684 in 1944. The express poundage was 91,992,032 as compared with 67,060,698; while the excess baggage reached 15,982,424 pounds against 11,969,838. The average total mileage per multi-motored aircraft was 1,780.5; 1,641.0 in 1944; while the mileage per single-motored aircraft was 274.9 as compared with 208.6.

The total number of accidents of public aircraft carriers operating in the United States for the year 1945 was 40, including 8 fatal accidents. The passenger fatalities were 76 and the pilot and crew fatalities, 12. The total revenue passenger miles for the year 1945 was 3,507,175,048; with the result that the revenue miles per passenger fatality was 46,147,040.

The operating revenue of American domestic air carriers in 1945 was: passengers, \$142,475,404; express and freight, \$10,704,885; excess baggage, \$2,257,092; charter flights, \$63,539; and other revenue, \$819,256; making a total non-mail revenue of \$156,326,177. The mail revenue was \$36,929,204. Thus, the total operating revenue was \$193,249,381. Corresponding figures for the year 1944 were: passenger fares, \$95,428,516; express and freight, \$7,753,614; excess baggage, \$1,816,942; charter flights, \$7,623; other revenue, \$1,003,475; making a total of non-mail revenue of \$106,010,172. Mail revenue in 1944 was \$27,948,133, giving a total of \$133,958,305. Total operating expenses in 1945 were \$148,744,071 as compared with \$107,312,054 in 1944. The net operating income was \$44,505,310 against \$26,646,250. Income taxes in 1945, minus non-operating income, amounted to \$21,391,713—\$14,923,208 in 1944. As a result, the net profit of domestic carriers was \$21,391,713 as compared with \$14,923,208 the previous year. The stockholders' equity or net worth of all domestic airlines was \$131,747,695, against \$102,430,240 in 1945.

International American Air Carriers. The following American air carriers possessed scheduled flights to foreign countries from terminal points within the United States in the year 1945: the Northeast Airlines, which served New Brunswick; the Colonial Airlines, which served Canada; the Northwest Airlines, also serving Canada; the United Airlines, also serving Canada; the American Airlines, which served Mexico; and the Western Air Lines which served Canada. American air carriers whose entire operations were international included the Pan American Airways, Panagra, Trans-World Airways (TWA) and the American Overseas Airlines. The latter carrier took control of the American Export Airlines, which had operated during the war under contract to the military services as the American Export. In July, 1945, the Civil Aeronautics Board granted certificates for North Atlantic routes to the American Overseas Airlines and the Transcontinental and Western Air. Pan American Airways also possessed a North Atlantic route. Statistics for international air traffic in 1945 do not include these three routes inasmuch as the reports from the Civil Aeronautics Board cover each year ending June 30.

In the year 1945, American carriers engaged in international traffic flew 25,293,704 pay-mail miles for the United States, 189,472 pay-mail miles for foreign countries, and 811,438 other revenue miles, making a total of 26,294,614 revenue miles as compared with 19,643,136 in the year 1944. The number of non-revenue miles flown was 2,402,184, making a total of 28,696,798 miles flown in foreign and overseas flights. Traffic passenger statistics showed 384,716 revenue passengers carried as compared with 306,349 in the year 1944. The available seat-miles were 471,247,164, the revenue passenger miles were 367,661,947 and the average passenger fare was 8.01 cents per mile. As to cargo traffic, American planes carried 3,187,141 pounds of United States mail, 1,167,084 pounds of foreign mail, 13,045,444 pounds of express, and 3,483,054 pounds of excess baggage. Operating revenues showed \$29,464,600 from passenger revenue, \$6,121,935 from express revenue, \$1,241,331 from excess baggage revenue, \$2,262,932 from other revenue, and \$7,904,062 from mail revenue, making a total of \$46,984,860 as compared with \$37,795,309 in the year 1944. The net operating loss was \$2,608,567 as compared with a profit of \$2,556,731 in the year 1944.

Safety Statistics. Of the 4,438 accidents reported by the Civil Aeronautics Board in the year 1945, only 177 concerned air-carriers and 4,261 involved planes not engaged in public transportation. In a total of 179,703,872 revenue miles flown, there were 48 major and minor accidents, and 7 fatal accidents. In other words, there was one accident for every 3,743,830 miles flown and one fatal accident for every 25,671,982 miles flown. This record compared unfavorably with the year 1940 when there were no fatal accidents, and favorably with the year 1937 when there were 7 fatal accidents. In 1937, there was one major or minor accident for every 1,224,646 miles flown, and one fatal accident for every 9,247,471 miles flown. The number of passenger fatalities in 1945 was 80; of pilot fatalities, 7; and of crew fatalities, 8, making a total of 95 fatalities. The total number of revenue passenger miles flown was 2,830,597,814; the revenue passengers carried was 5,137,877; and the percent of passengers fatally injured was 0.0016. The number of passenger miles flown per passenger fatality was 35,382,473; while the number of passenger fatalities per 100 million passenger miles was 2.8.

Civil Aeronautics Administration. The Civil Aeronautics Administration conducted 28,987 aircraft inspections for airworthiness, including originals, renewals and inspections after repair or alteration. The CAA granted type approvals for 35 aircraft, 50 aeronautical engines, 154 propellers and 51 appliances. It conducted 346 flying school and 237 ground school inspections, and gave 1,626 written examinations for airline transport pilot certificates. Civil Air Regulations require that every holder of a Federal pilot certificate must have a physical examination every six months if he is to keep his rating active. The Medical Service of the Civil Aeronautics Administration gave 9,200 physical examinations.

International Air Traffic. The year witnessed a continuation of the controversy over the "chosen instrument." Pan American Airways led the support of the McCarran Bill pending in Congress which would limit all American participation in foreign air traffic to one company—the "chosen instrument." The seventeen American companies which had in 1944 entered protest against the proposal of a "chosen instrument" continued their

opposition. In support of the proposed monopoly it was said that unlimited American competition would lead to competing flights with planes flying at half or less than half capacity. At the same time, the duplication of services would waste the resources of the competing companies and drive them into bankruptcy. Defenders of the policy also pointed to the fact that Great Britain relied upon the "chosen instrument" when granting a monopoly in foreign air traffic to the British Overseas Airways Corporation, while other European powers had followed the same policy before World War II and would resume this policy in the postwar period. In opposition, the seventeen airlines called attention to the dangers of stifling competition, the pitfalls of wasteful duplication of services could be avoided, they said, by agreements between competing companies and by proper support on the part of the State Department.

In March, the Department of Justice rendered an opinion opposing single-company operation of international air traffic under the American flag. Attorney-General Biddle recommended: (1) adoption of a "controlled competition" policy, (2) negotiation of an international understanding which would define and limit governmental financial subsidies for inter-country lines; (3) formation of an international organization to analyze carrier operations and regulations and to serve as a world problem-solving medium; and (4) encouragement of economic and legal conditions promoting continued private operation of America's international air carriers. In case private operation of international airlines proved to be profitless, the Attorney-General hinted that governmental operation of an international airline under the American flag might become necessary. "Controlled competition" was proposed as a compromise between monopoly and cut-throat competition. "Controlled competition" might assign alternative routes, within specified geographic zones, to competing companies.

In July, the Civil Aeronautics Board, following the policy of "controlled competition," authorized three American airlines to operate routes over the North Atlantic Ocean. These were Pan American Airways, American Overseas Airline, and Transcontinental and Western Air. This arrangement was protested by Pan American Airways on the ground that whereas its European terminal was restricted to Foynes in Ireland, the two other American companies were allowed to reach many European cities like Paris, and even Africa.

In July, the British Overseas Airways Corporation resumed commercial flights at least once weekly between America and England, using Boeing 314's. In October, the Pan American Airways and the American Overseas Airline began operation of their transatlantic schedules with respectively two and three trips a week. The Pan American Airways expected its quota to be raised to three trips a week through agreement between the State Department and the British Government. The flights were made with Douglas C-54s, which had been purchased as surplus from the Government and converted into commercial airliners at a cost of about \$150,000 each. Crews of seven manned the planes which carried an average of forty-four passengers. The planes cruised at about 211 miles per hour at an altitude of 10,000 feet. Both planes and the route flown to England were familiar to the crews, who had flown similar craft over the same route during the war, under the contracts of the American airlines with the Air Transport Command.

In October, Pan American startled the aviation world by applying to the Civil Aeronautics Board for permission immediately to cut the prewar fare from New York to London from \$525 to \$275, with a round trip rate of \$495. Permission was denied upon the ground that an immediate cut would not allow competitors to take appropriate measures. When, after the thirty-day period required by the CAB had expired and the Pan American Airways had reduced its rates, the British Government objected to such reckless slashing of rates and ordered a cut-back to two flights per week, with a proviso that no more than 500 passengers be carried each week. Inasmuch as the British Overseas Airways Corporation operated only three old Boeing Clippers on the North Atlantic route, with about twenty passengers a week, it was obvious that the British Government had dealt more generously with the American airlines than the principle of reciprocity demanded. Eventually a compromise fare of \$375 proposed by the Air Transport Association was accepted.

Air Transport Association. The Air Traffic Association, founded in 1919, was a private international organization of airlines for the purpose of investigating the operation of airlines, including rates and schedules. Its work was interrupted by World War II. It was revived under the name of the Air Transport Association and its seat located at Montreal in Canada. Seventeen American airlines joined the reorganized association.

International Air Conferences. In August, the first session of the Interim Council of the Provisional International Civil Aviation Organization was held in Montreal. The PICAIO is the temporary organization established by the Interim Agreement on International Civil Aviation, adopted by the International Air Conference held in Chicago in 1944. On June 6, when the Interim Agreement came into force, 36 states had accepted the agreement. Twenty states, elected at the Chicago Conference, were represented at the Montreal session. The organization is of a technical and advisory nature and is not empowered to regulate the economic phases of international air traffic.

The Chicago Air Conference had offered two general air agreements for the ratification of all interested states. The Transit or Two Freedoms Agreement binds signatory states to grant the privilege of transit and non-traffic stops to the planes of all other signatory states. The Transport or Five Freedoms Agreement includes not only the two freedoms just mentioned but also: (1) the privilege to discharge passengers, mail and freight received in the state whose flag the aircraft carries; (2) the privilege to take on passengers, mail and cargo bound for the state whose flag the aircraft carries; and (3) the privilege to take on passengers, mail and cargo destined for the territory of any other contracting state as well as the privilege to put down passengers, mail and cargo from any such territory. By the end of the year twenty-three countries, including Great Britain, the United States, Canada and Belgium had signed the Two Freedoms Agreement. Only eleven countries signed and ratified the Five Freedoms Agreement. While the United States accepted the two agreements, Great Britain declined to be a party to them. Soviet Russia, which had refused to appear in the Chicago Air Traffic Conference, likewise failed to adhere to any of the agreements.

Aeronautical Records. During the year several previous records of performance by aircraft were broken, although in some cases lack of a witness from the National Aeronautical Association barred

official recognition. On December 11, a new transcontinental speed record was chalked up when a B-29 piloted by Col. Clarence S. Irvine and Lt. Col. G. R. Stanley made a 2,464-mile flight from Burbank in California to Floyd Bennett Field in Brooklyn in 5 hours, 27 minutes and 8 seconds. In October, a British Gloster Meteor, a twin jet airplane, exceeded 640 miles an hour over a measured course in England. In August, Brig. Gen. Lawrence G. Fritz piloted an Army Transport Command C-69 from New York to Paris, a distance of 3,600 miles, in 14 hours and 12 minutes, to break the previous non-stop record of 18 hours. In June, the War Department disclosed the fact that Maj. Gen. Curtis E. LeMay had made a record non-stop flight from Hawaii to Washington in a B-29 Superfortress, covering 4,640 miles in 20 hours and 15 minutes.

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Books on aerial warfare included: Keith Ayling, *Old Leatherface of the Flying Tigers* (Indianapolis), a biography of Maj. Gen. Claire Le Chennault; Lowell Bennett, *Parachute to Berlin* (New York); Major C. G. Power, *The R.O.A.F. Overseas* (London); Lt. Comdr. J. Bryan and Philip Reed, *Mission Beyond Darkness* (New York), the account of a carrier attack in the Philippines; Hugh B. Cave, *Wings Across the World: The Story of the Air Transport Command* (New York); Thomas F. Collison, *The Superfortress is Born* (New York); James Forrestal, *Our Flying Navy* (New York); Eric Friedheim and Samuel W. Taylor, *Fighters Up* (Philadelphia); Gessner G. Hawley and Sigmund W. Leifson, *Atomic Energy in War and Peace* (New York); Rom Landau, *The Wing* (London); G. Edward Pendray, *The Coming Age of Rocket Power* (New York); Carleton Putnam, *High Journey* (New York).

Among the numerous textbooks on air navigation were the following: *Air Navigation: Contact Flying* (McGraw-Hill Book Co. series, New York); Charles Mattingly, *American Air Navigation* (San Diego); Sqd. Ldr. R. Hadingham, *Astronomical Air Navigation* (2d ed., London); Terence Horsley, *Soaring Flight* (London); Richard von Mises, *Theory of Flight* (New York); Robert W. Mudge, *Meteorology for Pilots* (New York); Henry W. Roberts, *Aviation Radio* (New York).

Aeronautical engineering produced a large crop of books including: Zygmunt Fombert, *Theory and Testing of Jet Propulsion Motors and Rockets* (New York); Joseph H. Keenan and Joseph Kaye, *Thermodynamic Properties of Air* (New York); R. G. Manley, *Waveform Analysis* (London); O. L. Morris, *Pioneering the Helicopter* (New York); Alexander A. Nikolsky, *Notes on Helicopter Design* (Princeton); G. Geoffrey Smith, *Gas Turbines and Jet Propulsion for Aircraft* (New York); James E. Thompson, *Aircraft Production Design* (San Carlos, California); Herbert S. Zim, *Rockets and Jets* (New York).

Aeronautical yearbooks included: *Jane's All the World's Aircraft, 1948-1944*, ed. by Leonard Bridgman (London); *Aviation Annual of 1946*, ed. by Reginald M. Cleveland and Frederick P. Graham (New York); *Aviation Facts and Figures, 1945*, ed. by Rudolf Modley (New York); *The Airman's Almanac, 1945*, ed. by Francis Walton (New York); *The Aircraft Year Book, 1945*, ed. by Howard Mingos; *The Aircraft Annual, 1945*, ed. by David O. Cooke (New York).

Among publications of the United States Government were: *Annual Airline Statistics: Domestic Carriers: Calendar Year 1945* published by the Civil Aeronautics Board; and *Civil Aviation and the National Economy* published by the Office of Aviation Information of the Civil Aeronautics Administration. The final report of General H. H. Arnold on American air power in World War II was published on November 12, 1945, as *Third Report of the Commanding General of the Army Air Forces to the Secretary of War*. On September 30, 1945, was issued *The United States Strategic Bombing Survey: Over-all Report: European War*. On the same day, a *Summary Report* was released. The final report of Gen-

eral George C. Marshall, published on September 1, 1945, as *Biennial Report of the Chief of Staff of the United States Army, July 1, 1943, to June 30, 1945*, to the Secretary of War, gives attention to air power in the strategy of World War II. Regarding aircraft as surplus, see the *Quarterly Progress Report of the Surplus Property Board to Congress*. The U. S. Department of State published *International Civil Aviation Conference, Chicago, 1944: Final Act and Related Documents*. Among publications of the British Government were *International Civil Aviation Conference, 1944* (Cmd. 6614); *Civil Aviation Communications Handbook: British Air Transport* (Cmd. 6805); *Ocean Front: The Story of the War in the Pacific, 1941-1944*.

KENNETH COLEGROVE.

AFGHANISTAN. A kingdom in central Asia. Area: 251,000 square miles. Population, according to the latest estimate, 12,000,000. Chief towns: Kabul (capital) 120,000 inhabitants, Kandahar 80,000 (including suburbs), Herat 85,000, Mazar-i-Sharif 30,000. The languages spoken are Persian, Pashto, and Turki. Most of the inhabitants are Moslems of the Sunni sect; others are Moslems of the Shiite (Shiah) sect. Primary and secondary education are free.

Production. Agriculture and stock raising are the chief occupations, the main products being cereals, fruits, vegetables, cotton, wool, hides and skins, and meat from the native fat-tailed sheep. The mineral resources include iron, copper, lead, gold, silver, lapis lazuli, coal, and petroleum, but there is little production. There are state-owned factories at Kabul, Kandahar, and elsewhere for the manufacture of arms, ammunition, boots, military clothing, furniture, matches, buttons, leather, soap, cotton goods, and wool products.

Foreign Trade. Commerce is mainly with India, the Soviet Union, and Iran. The chief exports are fruits, nuts, timber, spices, cotton, carpets, wool, and furs. Cotton textiles, machinery, gasoline, kerosene, sugar, motor vehicles, and tea are the main imports.

Communications. Afghanistan has no railways and practically no navigable rivers. Four thousand miles of roads are suitable for motor transport in dry weather, and trucks are increasingly replacing pack animals as the chief means of transportation. There is an all-weather motor highway from Kabul to Peshawar, India; a 500-mile motor route from Stalinabad, Soviet Turkestan, to Khorog on the Afghan border; and a trade route linking Kandahar to the Indian railhead at Chaman. Telephones are installed in most of the towns. Five radio stations serve the country and there is a radio installation which connects Kabul with Europe, the Far East, America, and other parts of the world.

Government. Under the Constitution of Oct. 31, 1931, Afghanistan is a constitutional monarchy, with legislative power vested in the King, a senate of 45 members nominated for life, and a national assembly of 109 elected members. Actually the state consists of a loose federation of warlike tribes under the patriarchal rule of the family controlling the government at Kabul. Through the influence of his uncle, Shah Mahmud, the Minister of War, Mohammed Zahir Shah succeeded to the throne after the assassination of his father, Mohammed Nadir Shah, in 1933 and remains the reigning King. King Nadir proclaimed a new constitution in 1932 under which slavery and forced labor were forbidden.

The People. The population is estimated at 12,000,000, all but a small proportion of whom are Moslems of the Sunni sect. Persian, Pashto and Turki are the principal languages. There are some 20,000 mullahs (priests) who wield great power, including the administration of justice and a large

measure of control over education. Primary education is compulsory. Schools in 1941 included 130 primary, 4 secondary and 3 military schools. A university was established in Kabul in 1932.

The Economy. The country is almost exclusively agricultural, with two harvests a year. The chief products are cereals, fruits, vegetables, cotton, wool, hides and skins, and meat from the native fat-tailed sheep. Commerce is mainly with the adjoining countries of Iran, the U.S.S.R. and India, to which agricultural and animal products, timber and cotton carpets are exported.

Afghanistan has no railways and few navigable river passages. The government has begun the building of motor roads to supplement or replace the traditional routes on which merchandise has been transported by camel and pony. The program for 1944 included the linking of Kabul with Khanabad and Faizabad with Badakhshan. Telephones are installed in most of the towns. Five radio stations serve the country and there is a radio installation which connects Kabul with Europe, the Far East, America and other parts of the world.

AFRICA. A continent of the eastern hemisphere. Area, about 11,710,000 square miles (30,830,000 square kilometers). Population (Jan. 1, 1940, estimate), 157,900,000. See the separate articles on its subdivisions, countries, and territories, such as ALGERIA, BRITISH CENTRAL AFRICA; BRITISH EAST AFRICA; BRITISH WEST AFRICA; EGYPT, ETHIOPIA, KENYA, MOROCCO, SOUTH AFRICA, UNION OF; TUNISIA.

AGENCIES, Government. The following government agencies and authorities were terminated on the date indicated: Electric Home and Farm Authority, Oct. 13, 1942; Committee for Congested Production Areas, Dec. 3, 1944; Coal Mines Administration, Aug. 16, 1944; Division of Central Administrative Services, Nov. 30, 1944; United States and Canada Joint Economic Committees, March 14, 1944; War Food Administration, June 30, 1945; War Public Works and Services, Aug. 14, 1945; Office of Distribution, Jan. 1, 1945.

AGRICULTURAL ADJUSTMENT AGENCY (AAA). An Agency of the U.S. Department of Agriculture, created as the Agricultural Adjustment Administration in 1933, incorporated into the War Food Administration, 1943, returned to the Department of Agriculture, June 29, 1945, and consolidated into Production and Marketing Administration (q.v.), August 18, 1945. Its program was directed primarily at adjusting national farm production to wartime needs, while encouraging practices which would increase yields and conserve soil resources. Wartime demands shifted emphasis placed on various phases of the AAA program. The program in 1944 and 1945 had three major phases:

1. Farmers were guided and assisted in producing up to national crop goals and in carrying out conservation measures which enable their land to contribute most to national farm production. Program payments were made only in connection with soil-and-water-conservation practices to increase present yields and maintain fertility for future production.

2. Marketing quotas were in effect for flue-cured and burley tobacco. (Available as a means of allocating the market among growers, marketing quotas, with penalties for excess marketings, may be used only when approved by two-thirds of the producers of a crop voting in referendum.)

3. The ever-normal granary, through which re-

serve stocks are held for emergency use, continued to be available through the Commodity Credit Corporation. The foundation of the granary is the commodity storage and loan program which AAA committees help to administer in the field.

In addition, the Agency was responsible for specific war food tasks such as encouraging farmers to sell corn to processors to keep war plants operating, rationing farm machinery, local assistance in administration of price-supporting measures, war crop loans, and feed and seed distribution. Chief: Norris E. Dodd.

AGRICULTURAL AND INDUSTRIAL CHEMISTRY, Bureau of. A Bureau of the U.S. Department of Agriculture, composed of two Bureaus originally created in 1901. It is a research organization engaged in investigations and experiments in the fields of chemistry, physics, and other physical sciences with the object of gaining new fundamental scientific knowledge relating to agriculture, improving agricultural methods, and developing new and wider industrial uses for agricultural products. The four regional laboratories for Research on Utilization of Farm Products conduct investigations to develop new and wider industrial uses for agricultural commodities. The Bureau's wartime research concentrated on food storage; food preservation, especially by dehydration; adaptation of lint cotton for nitration; treatment of cotton and cotton fabrics for special uses in wartime; and utilization of domestic agricultural materials as supplementary or substitute sources of products usually derived from foreign sources. Chief: O. E. May. See AGRICULTURE.

AGRICULTURAL COOPERATION. About half the farmers in the United States are members or patrons of farmers' cooperative associations. These groups pool their commodities to market them more effectively and also pool their purchasing power to get farm supplies and farm business services. Under such cooperative arrangements farmers provide for themselves business advantages similar to those obtained by industry through the use of pooled capital. As members of cooperatives, farmers themselves receive the savings effected by such joint action, usually in the form of patronage refunds; they get the grade of supplies required; they improve the quality of their own products; and in many instances, they provide themselves with needed business services otherwise not available to them.

History of farmer cooperatives in the United States goes back more than 100 years. "Associated or cooperative dairying" was attempted at Goshen, Connecticut, about 1810, according to the Handbook of Connecticut Agriculture issued in 1901. In the early days, farmers began to practice cooperation by log rollings, barn raisings, helping each other harvest crops, and many other acts of neighborliness.

By 1944 membership in farmers' marketing and purchasing cooperatives had grown to over four million, compared with a membership in 1915 of only a half million.

Farmers obtain both long-term mortgage credit and short-term operating loans cooperatively. About 370,000 are members of 1,754 National Farm Loan Associations through which Federal Land Bank mortgage loans are made, and 350,000 are members of 513 Production Credit Associations which supply them with operating credit.

Electric service reaches farms through the service of 800 Rural Electrification Cooperatives; 2,000

mutual fire insurance companies, 1,500 mutual irrigation companies, and 2,000 mutual telephone companies also provide farmer members with their specialized services.

During the past year at least four rural cooperative hospitals have been in operation. Groups in several other communities are going ahead with plans to build such hospitals when supplies can be obtained.

The marketing cooperatives started off the year 1945 with full war production. With the coming of peace, they found they would need to consider some changes, particularly new markets, since their ready-made outlet to Government for war needs would disappear along with that of many other businesses.

Most marketing cooperatives came out of the war stronger financially than ever before. They have paid off debts, built up reserves, and increased operating capital. The increased income of their farmer members resulting from higher prices for products and increased volume of business, together with the farmers' willingness to enlarge their equities in their cooperatives were largely responsible for this improved financial position.

Many marketing and purchasing cooperatives are increasing their activities by working with other associations. Local cooperatives are forming regional groups, and a few regional associations are cooperating to do jobs too big for the smaller organizations. As an example of the latter, four regionals joined together to produce feed, seed, and fertilizer for thousands of Northwestern farmers.

The scope and importance of agricultural cooperation in marketing farm products and purchasing farm supplies are indicated in the following summary: About 7,500 marketing cooperatives served a membership of about 2,730,000 farmers in 1943-44. The 2,780 purchasing associations had a membership of over 1,500,000 in that marketing season. In round numbers, 2,300 of the marketing associations are dairy cooperatives; 2,300 handle grain; 780 handle livestock and wool; about 950, fruits and vegetables, 530, cotton and cotton products; 160, poultry and poultry products; and about 500 handle other crops and furnish a variety of business services.

In 1943-44 these 10,300 marketing and purchasing cooperatives transacted business estimated at well over four billion dollars. Nearly 86 percent of this amount was accounted for by the marketing associations. The West North Central section of the country ranked first with nearly 30 percent.

Dairy, grain, and livestock associations led other commodities in the 1943-44 volume. Dairy cooperatives produced milk, cheese, butter, and non-fat dry milk solids for the war but had to make some adjustments. They shifted to receiving more whole milk and less cream from the farms. More associations have become interested in retailing milk of their members, and there is a trend toward large-scale dairy plants that can shift from one dairy product to another as market conditions change. Artificial breeding associations continued their rapid growth, from 95 to 195 in 1944.

Livestock cooperatives during the war found more farmers selling at country points and fewer shipping to terminal markets. As a result of these changes in methods of marketing, farmers in many sections of the country are planning to set up small meat-processing plants.

Higher prices accounted for most of the increase in dollar volume of business done by grain cooperatives in the last marketing season. More grain is moving to market through regionals from the locals

than ever before. The trend in seed purchasing and marketing is also toward local co-ops working together through regional associations.

In many parts of the country, cooperative farm supply associations are pacemakers in service, quality, and price. During the war substantial gains were made. Feed cooperatives doubled their annual tonnage; both the manufacture and distribution of fertilizer expanded considerably; in the petroleum field seven of the ten oil refineries now operated by cooperatives were purchased by regionals; several hundred miles of pipe line, a number of producing oil wells, and several thousand acres of oil leases were acquired.

A new cottonseed oil mill organized during the year brought the total to 14. Soybean cooperative mills made a big wartime jump . . . from only two in April 1942 to 21 by the middle of 1945.

Farmer-owned locker plants are one of the newest and the most rapidly growing of any type of cooperative . . . increasing by about 100 in the past year. These locker plants store food for their patrons. Many also do slaughtering and processing, handle packaged frozen foods from commercial firms, and service home freezers.

Eastern poultry associations have begun to broaden their operations, to supply members with hatching eggs, feed, and other supplies, and to operate poultry dressing plants. In commercial broiler areas several cooperatives have set up plants to process and market broilers.

In addition to providing fruits and vegetables in volume during the war, plants, and laboratories of some of these cooperatives did valuable research. One originated a process for converting by-products of fruit processing into industrial alcohol. Others developed citrus concentrates.

Cooperatives work together through their State-wide organizations, usually called State councils. There are now 32 such State councils. On the national scale they work together through the National Council of Farmer Cooperatives in Washington, D. C., the National Association of Cooperatives in Chicago, Ill., and the American Institute of Cooperation in Philadelphia.

W. W. FETROW.

AGRICULTURAL ECONOMICS, Bureau of. A Bureau of the U.S. Department of Agriculture created in 1922 by the merger of three existing units. It is the central statistical and economic research agency of the Department, and publishes a wide variety of facts about agriculture. Chief: Howard R. Tolley.

AGRICULTURE IN THE UNITED STATES. Farm production in the United States was in the hands of the weather man when World War II came to an end, and the termination of the hostilities affected it very little. Crop and livestock production together, aimed at goals adopted the previous fall, was very nearly equal to the record outputs of 1944 and 1942. Production of food grains was the largest on record, of feed grains the second largest, and of livestock products the second or third largest. Corn was again a three-billion bushel crop, for the fourth successive year; wheat production, as in 1944, exceeded one billion bushels; the oats crop for the first time passed 1½ billion bushels, and tobacco, the 2-billion pound mark. On the other hand cotton production, on the smallest acreage harvested since 1885, amounted to less than 9½ million bales and with one exception was the smallest cotton crop since 1899. Output of livestock and livestock products was about the same

as in 1944, and only 5 percent below the 1943 level. The slight reduction from 1944 in the total output resulted from lateness in planting, retarded plant growth, delays in farming operations, and frosts.

But the termination of the hostilities affected distribution very greatly. Almost immediately it reduced military requirements both for the United States forces and for this country's allies, but raised the demand for world relief purposes and for United States civilians. Subsequently, the distribution pattern underwent further change, from the dropping of the lend-lease system. In 1945, U. S. military and war services took 10 percent of the food output, exports of all kinds took 12 percent, and U. S. civilian consumption took the remainder. Forecasts of what the division would be in 1946 could not be precise, because foreign requirements were dependent on a host of problematical factors, notably occupation programs, relief plans, and credit negotiations. It was certain, nevertheless, that the division would be different from that of the previous years. On the assumption, for example, that our total military strength would drop to 3 million by the end of 1946, the Department of Agriculture estimated U. S. military food requirements for the year would be only one-fifth as great as those of the high point in 1945. Conversely, the Department looked for an increased total U. S. civilian food consumption along with an important though unpredictable increase in relief shipments and commercial exports. In the war years it was not possible to produce enough food for all requirements; but it was evident that in the postwar years the farmers' problem would ultimately be the opposite one of markets, distribution, and price-relationships.

Nevertheless, postwar problems of agricultural readjustment were not immediately urgent; on the contrary, the outlook for the years immediately ahead was favorable. Assuming high U. S. employment in the reconversion period, and also considerable farm export trade, the Department of Agriculture surmised the market for most farm products would be temporarily about equal to the farm production capacity—about one-fourth above prewar. This required per capita domestic consumption at 8 or 10 percent above prewar levels, plus exports at about the same percentage of the production as those of 1945. The export percentage of the farm output was near this level or about 12 percent in the first years after World War I, though in the late 1930's it dropped to 4 percent. It was not the short-run but the long-run problem that chiefly preoccupied farm economists—the problem of making the food demand stay in balance with production power. Even full employment, they pointed out, would not do away with the need for some crop adjustments; serious unemployment would call for additional crop curtailment, and perhaps also for extensive surplus-disposal programs.

Farmers increased their wartime overall production by roughly one-third above the prewar level. This was a threefold greater increase than that of the World War I years. Gross farm production was only about 24 percent larger than during the prewar (1935-39) period; but among other things this figure includes the production of feed for farm horses and mules, an item that has been declining for many years; it has been largely supplanted by urban production of machinery and fuel. With the feed consumed by farm horses and mules eliminated, and the reckoning confined to production for sale and for use as food on the

farm, the 1944 total for example was 36 percent above the average for the five prewar years; the percentage for 1945 was about 31. Production of food alone on farms in 1944 was 38 percent above prewar; the calculation for 1945 is not yet available. Noteworthy too was the wartime change in the composition of the farm output. Cash crops, with cotton an important exception, averaged from 15 to 20 percent higher in volume. Output of oil-seed crops for the three years 1943-45 was nearly three times the prewar average. Hog production at the 1943 peak was 77 percent above prewar; dairy production from 1943 through 1944 was 15 percent higher. This change in the crop pattern involved difficulties and costs.

Agriculture achieved its wartime increase with 10 percent fewer workers on farms, and with machinery and other facilities relatively scarce. Progress in farm technology, along with a general lengthening of working hours, was chiefly responsible for the rise in the farm output. True, the weather was favorable for crops throughout the war years; but the Department of Agriculture credits the above-average weather that prevailed with only one-quarter of the increase. Little of it can be attributed to crop-acreage expansion; the wartime peak of planted acreage in 1944 was only 2 percent above the prewar average. Big factors in the gain were increased use of machinery, aided by much pooling, and an 85 percent jump in the use of commercial fertilizer. Other aids to the farm war effort included a more general use of improved crop varieties, drafts on fertility previously stored by conservation practices, and better feeding of livestock. Farmers adopted improved practices to an extent that could not have been predicted, and accomplished almost a technical revolution.

Farmers now have sufficient production-capacity to maintain their output of cash crops, such as wheat, cotton, tobacco, fruits and vegetables, and oilseeds, at probably 25 percent above the prewar level. They have enough capacity to keep their output of feed crops such as corn, oats, barley, grain sorghums, and hay at about the same percentage higher. Livestock production in 1943, 1944, and 1945 averaged about 40 percent above the prewar level; farmers can easily maintain it, says the Department of Agriculture, at about 25 or 30 percent above the 1935-39 average. The jump to 40 percent higher in the war years resulted partly from the use of big feed reserves. Hereafter, better feeding practices, the improvement of pastures, and other methods will provide stimulus. For example, some land now in intertilled crops will be shifted to grasses and legumes, with advantage to livestock raising. But in order to use their expanded production-capacity, the farmers will need high domestic consumption and a lively export trade. Though the immediate outlook is good, the longer-time problem will require serious planning and action. Some notice of this problem will be appropriate later in this article, after a glance at the world food situation, which constitutes the total setting for the farm adjustment.

The World Food Situation. Measured in calories the total world output of food in 1945-46 may be about 3 percent less than the prewar average. This is an estimate by the Department of Agriculture, based on reports from its own representatives abroad and on reports from foreign governments. It seems like a small reduction, after more than five years of literally world-wide destructive war; but in these years the world's population has grown, despite the slaughter. On a per capita basis the 1945-46 world food production may be as

much as ten percent below the prewar level, and by countries it will be very unequally distributed. Some countries, notably those of the western hemisphere, will have more food than they had before the war; but other countries will have very much less. Thus continental Europe (not including the USSR) and North Africa combined may have an output as much as 25 percent below the pre-war average. Production in Japan may be as much below the prewar level as that of continental Europe. It is below the prewar average in other areas of the Far East.

Sharp reductions in most major food products add to the seriousness of the problem. Supplies of rice, sugar, fats and oils, and meat products will be much below prewar levels. Even wheat, though more abundant than before the war, will be less plentiful than during the war. World milk production may be lower than in prewar years, despite the increase in North America. In Europe livestock production has declined tremendously, poultry and eggs the most. Supplies of wheat, rice, and other foods in India and China, though likely to be about equal to that of the prewar years, will not cover the population-growth, and will not reach all needy areas. Supplies in the USSR however will be greater than in 1944-45, though still far below pre-war.

In contrast with the United States most European and Asiatic countries have a shortage of production-capacity. Almost everything required in farming is scarce from seeds to draft-power and transportation. In many places even manpower is not available, not to speak of machinery, fertilizer, feeds, fuel, and machinery. Paradoxically, moreover, the farmers suffer from a lack of markets. This is not the result of any lack of human need for foods and other farm products, but of breakdowns in distribution systems, and of shortages of goods that farmers need. In many countries inflation renders money unacceptable. Farmers often hoard their crops, and wait for chances to barter them. Political and social disturbances interfere with agricultural operations, notably in the Balkan countries and throughout the Danube Basin. Programs for the partition of great estates hamper production at least temporarily.

Nevertheless, with average weather conditions, world food-production should increase in 1946-47. In the Orient, particularly in rice and oil-crop areas, it should benefit from restored access to world markets, as well as from the decline of fighting. In continental Europe it should benefit from plans that are being worked out for increasing the supply of fertilizer and machinery. It may be some years, particularly in eastern Europe, before farm production gets back to normal; but the output should soon rise from the present low level. Fuel and transportation, which have been critically short, will be more easily obtained. Livestock production requires large amounts of imported feedstuffs and may lag behind the crop recovery; but some increase is likely even in the livestock industries. Probably 1946 will be the most critical year. Necessary food imports for continental Europe, exclusive of the USSR, have been estimated for the food year 1945-46 at above 18 million tons. This is the amount necessary to raise legal non-farm supplies in liberated countries to 2,000 calories per person per day, to provide minimum supplies for ex-enemy countries, and to allow some increase in imports to neutral countries.

Participation in Relief Shipments Compatible with High U. S. Consumption. Meantime, this country and some of the other United Nations will continue

to provide considerable food for hungry countries. President Truman committed the U. S. to the policy of helping Europe to the limit of our strength; he instructed government agencies to put various emergency measures into effect, as means of helping to prevent mass starvation in many countries. In half of Europe the urban population was existing on as little as 2,000 calories or less per day, as compared with the estimated 3,260 calories per day available to people in this country. About 100,000,000 people in Europe in 1945 had less than 1,500 calories per day. The Congress approved further allocation of funds to UNRRA; but year-end reports from Europe indicated 1946 food supplies there would fall below the earlier expectations, and showed that the need would exceed the provision for meeting it.

Measures under consideration as 1945 ended included additional emphasis on food conservation in this country; the production, by means of a higher extraction rate, of more flour from each bushel of wheat milled; priorities for the rail movement of foods to the seaboard; the control of wheat and flour exports to destinations of greatest need; the reduced use of grains in the production of alcoholic beverages; greater conservation of grain in the feeding of livestock, in line with the principle that when lives are at stake the food-use of grain will take care of more people than the conversion of grain into livestock products. Stocks of wheat in the U. S. were 61 million bushels less than had been anticipated, as a result chiefly of the increased feeding of grain to hogs, cattle, and poultry. Accordingly, ceiling-changes were proposed to encourage marketings of animals at lighter weights. Our farmers had no immediate need to worry about food surpluses; it was evident that in 1946 all the food that could be raised would be in urgent demand at home and abroad.

This prospect, along with the expectation that per capita consumption of food in the United States would rise above the wartime level, removed immediate worry over the farmers' markets. Food production in war years provided abundantly for our armed forces, liberally for lend-lease shipments, and more than the pre-war average for United States civilians. Specifically, the per capita consumption of food in the United States rose and stayed at about 8 percent above pre-war, and it consisted to a higher degree than previously of the better foods. In the absence of rationing the consumption-level would have gone higher. Even if the per capita rate shows no change, total civilian consumption will increase in 1946, as a result of demobilization and well maintained consumer buying power. Thus agriculture's immediate problems should be manageable. Some change from the wartime pattern of production may be required; but the change will not be of such a nature as to involve any large net curtailment of the output, though the Department of Agriculture says production goals must be highly selective in order to avoid both surpluses and shortages. Up to the end of November no important overall cut-backs had been proposed, though some crop shifts had been advised.

Rationing Ended Except of Sugar. On November 24, 1945, the Secretary of Agriculture, with the Price Administrator concurring, announced termination of the rationing of meats, canned fish, and fats and oils. The only food item left under rationing was sugar. Because of a serious worldwide shortage, there was no immediate prospect of lifting sugar rationing. The decision to lift the rationing of the other foodstuffs was made possible by changes

since V-J Day in food requirements and supplies, notably sharp reductions in military takings, seasonal increases in livestock slaughter, an increase in the production of chickens and turkeys to an all-time high level, and prospects for a record supply of eggs. Supplies of meat available to U. S. civilians for the month of December, 1945, were estimated to be at an annual rate of 165 pounds per capita, as compared with the prewar (1935-39) average of 126 pounds. This was after allowing for military needs and for set-asides to provide more than 30 million pounds weekly for shipment to Allied and liberated countries plus a substantial amount for commercial export. Allowance for the taking of a substantial tonnage by UNRRA, the department said, would still leave supplies above the quantities that would necessitate continued rationing.

In 1946, the announcement stated, the civilian meat supply would continue favorable, though with some tightening in the second and third quarters. Fats and oils, it explained, would continue in short supply; but discontinuance of the rationing of these commodities in the United States appeared to be preferable to the institution of a completely new system of rationing for fats and oils alone, such as would be necessary with meat rationing terminated. Such a new system would involve the registration of more than 500,000 industrial and institutional users and the possible issuance of new ration books to all civilians. Allowing conservatively for exports of fats and oils for essential relief purposes, the Department estimated civilian supplies of fats and oils in the first half of 1946 might be nearly 10 percent below the prewar rate.

Consumption of fats and oils in war-ravaged countries was certain to continue far below prewar levels for some time, and it was essential that steps should be taken to fill their minimum needs. Besides making some supplies available from the United States for this purpose, the Department was acting to obtain all the vegetable oils possible from the recently liberated Far Eastern areas. It was on the lookout for supplies which might be available elsewhere, and was improving the collection and procurement machinery. Also, it was urging continued effort to prevent waste and to salvage waste fats. Meantime, the Department said, the set-asides and other regulations would be continued, and manufacturers of shortening, margarine, salad, and other edible oil products would be asked to operate under the existing quota limitations. In addition, allocations and export and import controls would be maintained.

U. S. Agriculture's Long-time Problems. Looking beyond the reconversion phase, during which relief and other urgent demands abroad plus active domestic employment may be expected to sustain the demand for farm products, agricultural economists attempted to sketch out basic long-term probabilities. They did not foresee an indefinite continuance of the demand at the prevailing level, or at any rate not a continuance of it automatically. Two factors in the current situation, they pointed out, would eventually have to be replaced—deferred spending in the home market and relief shipments to foreign countries. Urban employment might run high temporarily on the basis of deferred spending to fill shortages; but the most liberal estimates for this factor, which draws on wartime savings, allowed it only a few years. As for the relief call, it seemed likely to have an even briefer life, though with prospects that commercial foreign takings would ultimately fill the gap. Agriculture's hopes for the longer future could not rest on the

backlog of deferred domestic demand; yet plans to provide a more lasting adequate demand were in only the discussion stage. Its hopes for export trade on a commercial basis encountered a different obstacle—the necessity to meet competitive world prices. This opened up the entire problem of price-policy, for the domestic as well as the foreign market, along with the related problem of production-planning.

Agriculture can influence the domestic demand for its products only to a very limited extent; it has almost no say, for example, with regard to volume of urban employment. On the other hand, it can decide very largely, in terms of price-policy, what is to happen to its commercial exports. Officials of the Department of Agriculture reminded farmers that in order to get an adequate foreign market for their products they would have to meet the price-terms required. Specifically, they said, it might be necessary to sell part of the farm output at world prices below domestic prices. The Surplus Property Disposal Act of 1944 (Public Law 457, 78th Cong.) authorizes this procedure. It allows the Commodity Credit Corporation to sell farm commodities and the products thereof in world markets at world prices. This may be done, however, in a number of very different ways. Study of the various possibilities bulked large in the agricultural discussions of 1945. Mainly the discussion turned around the necessity for adjusting price-support and production policy to postwar needs. There was no disposition to challenge the parity income goal for agriculture, as defined in the Soil Conservation and Domestic Allotment Act of 1937. Experience had shown, however, that parity prices did not always necessarily produce parity incomes, owing to the fact that in certain cases notably in connection with the export crops parity prices interfered with sales. Hence, farm economists examined other possible methods of reaching the farm-income objective.

Agricultural price-policy has been determined for the years immediately ahead by federal legislation, some of it of prewar origin. Briefly, this legislation provides that for two years following designation of the end of hostilities the Government will support both the so-called basic and the so-called Steagall amendment commodities at not less than 90 percent of parity, and that it will support the prices of other farm products on a comparable basis to the extent that funds are available and producers are able to bring their supplies into line with demand. The basic crops are the ones named as such in the Agricultural Adjustment Acts—namely, cotton, corn, wheat, tobacco, rice, and peanuts for nuts. So-called Steagall amendment commodities are those formally proclaimed during the war as needed in increased amounts. Support prices have been announced also for some non-basic and non-Steagall commodities. As mentioned, the price commitment for commodities other than basic and Steagall commodities is conditional upon the availability of funds and the adjustment of supply. When the two years after the declared end of the hostilities are up, the whole broad question of price-support and production policy will be due for overhauling, and the Department of Agriculture has already drawn attention to some of the things that will have to be considered.

Farm policy in postwar years, the Department indicated, would face the twofold problem of protecting the farmer's income and maintaining outlets for farm production. It noted the Congress had manifested an intention to provide whatever funds might be required, and said these funds would be used in line with the authorized procedures best

sulted to achieve a sound reconversion pattern. The basic legislation authorizes many different procedures, such as commodity loans, subsidization of exports, acreage allotments, and marketing quotas.

Cotton and wheat are the problem crops in world trade. Heretofore, in peacetime, we depended on foreign countries to take more than half our cotton crop each year. The war almost suspended our cotton export trade. Our own consumption increased, however, and we sent some cotton abroad as lend-lease aid, with the result that our surplus did not increase though it remained large. But we need foreign customers. This is also true, though less urgently, of wheat. Our price-supports, which hold domestic cotton and wheat prices far above world prices, stand in the way; and though temporarily we have export-subsidy facilities, the search is on for a more permanent procedure.

Among numerous possibilities, two at the opposite extremes may be thrown out—price support at full parity for unlimited production; and no price or income support at all. Three intermediate possibilities may be mentioned: (1) Maintenance of cotton at parity only for the domestic portion of the crop, with the growers entitled on a prorata basis only to the world price for the rest, and with full scope to produce all the cotton they wish; or in other words a two-price system: (2) one price, adjusted to the world level, for the entire crop, with growers entitled to government payments as partial compensation, and not obliged to make any crop adjustments; and (3) the same world price, accompanied by government payments to maintain the income level of growers and supported by an extensive, regional conversion program with crop diversification and local industrialization as main features.

Such plans presuppose a transition to a free or world-market basis, with government payments used as shock absorbers and changes effected meanwhile in the structure and costs of cotton and wheat farming. These proposed reorientations of the export crops to export markets reflect a belief that the straight export-subsidy plan will not prove permanently workable. They refer, of course, to long-range possibilities, since legislation already on the statute books determines the immediate price-policy. Common to them all is an intention to fulfill the basic objective of current and recent farm policy; namely, to assist farmers in getting a fair share of the national income. Specifically, they involve a decision as to whether cotton and wheat growers want relatively high prices with a relatively small market or lower prices with a larger market.

The basic question of overall farm policy, as an inter-bureau committee of the Department of Agriculture expressed it, was to what extent the nation would have to rely on restrictive measures, and to what extent it would prove possible to depend on full and efficient production in a national economy geared to full employment, increased consumption, and expanded world trade. Barriers to world trade, the committee said, should be reduced. It declared the world ought not to return to the prewar practice of national price or income-support measures adopted unilaterally by most producing countries without regard to the effects on other countries. Instead, the problem of handling world supplies should be met by international arrangements, designed both to maintain prosperity in agriculture and to promote a high rate of consumption throughout the world.

In the United States, the committee added, it would be important to have a high level of export

trade in factory products as well as in farm commodities, since exports of industrial goods would help to maintain domestic employment and consumption. Along with fulfillment of price or income-support commitments, the committee recommended that more stress than in the past should be laid on ways of stabilizing farm income by means other than production control and price-supports, especially on programs aimed at expanding the world demand for farm products, reducing the costs of agricultural production and marketing, and improving farm living conditions through the provision of better roads, schools, housing, and health facilities. Underlying this general principle is the conviction that beyond a certain point, the drawbacks exceed the advantages of production-control and price-support. This is especially true of crops that must be exported in large amounts; applied to these, the attempt to regulate production and prices makes the going easier for competing countries.

It is impossible to dispense with farm export trade. Without farm exports, no speedy solution of the American farm problem is conceivable. Even in the late 1930's, after a decade of near paralysis in world trade, this country exported about 40 percent of its cotton, about one-third of its tobacco, nearly one-tenth of its wheat, and large quantities of rice, lard, and fruits. Expanded in the war effort, the export power is even greater now. With so much of its production designed for export, agriculture needs foreign outlets to safeguard its domestic business. Formerly, this was obvious; if exports stalled, domestic prices slumped. In a somewhat different manner the principle holds under the price-support system; for if price-supports oblige the government to store the export surplus, the ultimate result is either a surplus-disposal problem or drastic crop limitation. Hence, as long as production for export continues at all, it poses a problem which is at once domestic and international. With the government supporting crop prices, the problem is how to keep on doing that and at the same time move export surpluses into export channels in ways that foreign countries will not oppose. It is a problem, of course, in international cooperation, possibly made easier by the fact that most countries now have price and trade controls. Obviously, if they expect to do much business with one another, they must reconcile their domestic with their world trade operations. This applies as fully to the United States as it does to other countries, as numerous official statements acknowledge.

In connection with these and other discussions of the world trade problem the Department of Agriculture has pointed out that the United States seeks no unfair advantage. It wishes only to offset its handicaps. These have partly resulted from measures taken to improve the prices of the export crops—measures that have benefited foreign as well as American farmers. How these measures should be altered has not yet been determined; but that they must be altered everyone admits, because the system inherited from prewar years tends to hamper United States farm export trade. Hence, while insisting upon its right to act, the government has offered to negotiate arrangements with other countries by which they may be protected from untoward or unintended consequences. Essentially, the problem is to harmonize the price-supports with the necessity to sell export supplies on a competitive basis. Chiefly required is a method for working out practical mechanisms for international collaboration.

Farm Income in 1945. Cash receipts from farm marketings in 1945 seemed likely to total about 20,400 million dollars—3 percent more than in 1944. The income from crops was expected to be 5 to 10 percent above the previous last year's, while the income from livestock and livestock products reflected decreased sales, particularly in hogs.

Marketings of crop and livestock combined were about the same as the record total of 1944, but included an unusually large proportion of crops from the previous year's harvests. Total marketings of crops in 1945 were about 7 percent greater than those of 1944, while marketings of livestock and livestock products were smaller by about the same percentage. Prices received by farmers in 1945 were about 2 percent higher than in 1944 with livestock and livestock products showing a greater gain than crops.

Total expenses of farm production for 1945 were about 4 percent above those of 1944. Increases were relatively large in labor costs and in maintenance and depreciation. Wage rates were up about 8 percent; the value of perquisites to hired workers was up slightly, in line with the higher value of farm products. The total costs of hired labor in agriculture, for wages and perquisites, seemed likely to be about 7 percent higher than in 1944. Charges for maintenance and depreciation increased partly because farmers had more opportunity to replace outworn and outmoded equipment. Expenses of maintenance and depreciation were from 5 to 10 percent above 1944. Expenditures for purchased feed declined. Taxes and mortgage interest showed little change from 1944.

Analysis of the receipts and the expenditures indicated the net income to operators in 1945 would be about 3 percent higher than in 1944. Value of products consumed in farm homes was slightly higher; the rental value of operators' dwellings showed a small increase, in line with some rise that had taken place in real estate values; government payments were about the same as in 1944.

Agriculture's Balance Sheet. Measured by the dollar value of its goods, agriculture increased from a 49-billion-dollar industry to a 74-billion-dollar industry during the five years ended January 1, 1945. During 1944 the increase was from 69 to 74 billion dollars; comparable figures for 1945 are not yet available. Farmers' financial assets, such as currency, deposits, and war bonds increased from an estimated 5 billion dollars on January 1, 1940 to 13 billion dollars on January 1, 1944 and to nearly 17 billion dollars on January 1, 1945.

Farmers' liabilities have decreased. Farm-mortgage indebtedness, at 5,271 million dollars on January 1, 1945, was 364 million dollars less than a year earlier, and 1,316 million dollars less than on January 1, 1940. The 1945 total was less than one-half the all-time peak in 1923 and was the lowest since 1916. Non-real-estate indebtedness (excluding non-recourse loans guaranteed by CCC) showed a slight decline.

Obviously, proprietors' equities have benefited. The proprietors held a 90 percent interest in the physical and financial assets associated with agriculture on January 1, 1945. This proprietary interest totaled 81,820 million dollars, or 8,447 million dollars more than a year earlier and 38,036 million more than five years earlier.

Farm income has been high since the war began. The wartime rise of prices has been the chief factor in the improvement of agriculture's financial structure. In 1944, however, total net income from agriculture, excluding Government payments, de-

clined to 14.9 billion dollars as compared with 15.2 billion dollars in 1943, which may prove to have been the wartime peak. The decline in the net income was in the face of a rising gross income, which includes not only cash receipts from marketings but also the value of products retained on farms for home consumption and the rental value of farm home.

Caused, in part, by rising operating expenses, the principal cause of the 1944 decline in the net farm income was the necessary charge against receipts for heavy inventory reductions. Gross income in 1944 included returns not only from the sale of the enlarged output of that year, but also, in a larger degree than usual, from the sale of output of former years. The inventory of such items for sale decreased 415 million dollars in 1944, largely as a result of decreases in numbers of livestock on farms.

The increase in value of physical assets during 1944 was largely the result of a further 4.7 billion-dollar rise in land values. A .394-million-dollar increase in machinery and automobiles and a 250-million-dollar increase in crops on hand were almost exactly offset by a 668-million-dollars decrease in the value of livestock.

Farm real estate accounted for 55 percent of the total assets on January 1, 1945; it increased in value from 33,642 million dollars in 1940 to 50,295 million dollars in 1945, or about 50 percent. Value of livestock and crop inventories reflected both by physical increases and higher prices. The index of prices received by farmers for farm products averaged 195 (1910-14 = 100) in 1944 or about 1.6 percent higher than in the previous year.

Principal Crop Results of 1945. Farm production in 1945, as noticed at the beginning of this article, was about as large as the United States has ever known. Farmers had difficulty with their seeding in the fall of 1944; much fall grain had to be sown in dry ground or much later than usual. But October rains speeded seeding operations and gave grains seeded in the dust a chance to germinate. Hence 1945 began with yield prospects above the average, and an early spring further improved them. In fact the weather favored small grains until they were mature, although it was less favorable for other crops. But subsequently the weather became favorable for the late maturing crops, and harvesting proceeded without serious losses.

In production facilities the farmers began the season with no bad handicaps. Labor, to be sure, was still scarce; but farms had been mechanized pretty generally, to the extent that the supply of tractors and other implements permitted. Other difficulties occasioned by the war, such as transportation delays and shortages of certain supplies, were less serious than in the previous war years. Farmers had to refrain from expanding their crop acreage as much as would have been possible in the absence of these handicaps, and they found it necessary also to emphasize the crops that would produce the most from the facilities available. On the whole, nevertheless, the season's work encountered no bad set-backs and resulted in an output as well adapted to requirements, both in volume and in composition, as that of any of the previous war years.

Acreage of all crops harvested, as estimated by the Department of Agriculture in November, was 351 million acres. This was only slightly less than the acreage of 1944 and was the second largest since the period 1928 to 1932, during which the combined acreage varied from 351 to 362 million acres. Some shift took place from row crops to

small grains, because the labor requirement for small grains is lighter. Nevertheless, the farmers were not able to plant all the small grains, sorghums, and corn they had planned. They increased their acreages of tobacco, of sugar beets, and of truck crops, though these crops have high labor requirements. On the other hand, cotton growers planted only 13,355,000 acres, ten percent less than in 1944 and less than in any previous year in this century. Acreages of corn, barley, peanuts, cotton, and sugar crops were below the goals by an aggregate of nearly 12 million acres or 3 percent.

A second successive billion-bushel wheat crop was harvested. At 1,150 million bushels, it exceeded the previous record crop of 1944 by nearly 7 percent. The yield, at 17.7 bushels per harvested acre, was well above the average, though not a record. A relatively large proportion of the seeded acreages of winter wheat remained for harvest as grain, and the spring wheat crop was large. On the other hand, the rye crop was small, though yields were above average. Rice yielded well and produced a record crop in spite of a disastrous tropical storm in the rice area of Texas. Buckwheat production was above average but below that of 1944.

Corn production, for the fourth successive year, exceeded 3 billion bushels and was the third largest of record. The yield per harvested acre was exceeded only in 1942. About 64 percent of the acreage was planted with hybrid seed. Besides increasing the yield, the use of hybrid seed helped the crop, which had been planted under adverse conditions, to mature quickly and uniformly enough to escape major frost damage, though frosts in the northern and western Corn Belt occurred at about the usual dates.

Farmers harvested the first 1½ billion-bushel oats crop. Favorable growing weather counteracted the effects of late planting and resulted in high test weight and a heavy yield per acre. Barley, grown on a smaller than average acreage, gave the highest yield per acre since 1915, and the production was slightly above the average. Acreage of sorghum grain was reduced by relatively light abandonment of wheat acreage in the Southwest, where abandoned wheat land is often replanted to sorghums. On much of the acreage the sorghum crop was planted late. Moreover, it suffered from dry weather and from frosts; nevertheless, although much below the 1944 crop, it was the fourth largest ever produced.

Cotton production, on the smallest acreage harvested since 1885, was less than 10 million bales, and with the exception of the 1934 crop was the smallest since 1922. Plantings were late and the season was unusually wet. As a result, the growth was rank, and harvesting and ginning extremely slow.

Tobacco for the first time passed the 2 billion-pound mark. Growing conditions favored the late crop. Production of peanuts was more than 2½ billion pounds. At 53 percent above the 1934-43 average, it was an all time record. Production of soybeans topped all previous records, though much of the soybean acreage was planted late and the pods did not fill as well as expected. Dry beans were the smallest crop since 1936, and many of the beans were immature or damaged by frost and rain. Hay, potatoes, and flaxseed were near-record crops, and the outturn of sweet potatoes was above average.

The citrus crop promised to be a record. Peaches, pears, and sweet cherries were record crops. On the other hand, apples and sour cherries were record lows. Together, the citrus and deciduous

fruit crops were about 5 percent less than in 1944, but 17 percent above the average. Production of tree nuts was greater than in 1944 and about a third more than average. Production of commercial vegetables for the year set a new high record; it was at least one-fourth above average. Output of vegetables grown for processing exceeded the average by more than 40 percent. Seed crops suffered from unusually wet weather at harvest time; yet the production was above average and indicated relatively few seeds would fall short of 1946 requirements.

Total food grain production was 37 million tons—2 million tons more than in any other year. Total feed grain production was 121 million tons. Together with the big hay crop and a large tonnage of other roughages, it gave a feed supply exceeded only once before—in 1942. At the beginning of the October feeding season, supplies of feed per animal unit were the largest in the 20 years of record. Pastures and green feeds were abundant until a late date.

Production of livestock and livestock products in 1945 was at about the same level as in 1944—only 5 percent below the all-time high of 1943. It was estimated approximately 45 billion pounds live weight of cattle, hogs, sheep, and poultry would be produced in 1945, or about 6 billion pounds less than the 1943 production and slightly less than that of 1944 or 1942 but substantially more than that of any other year. Milk production promised to establish a new record at about 123 billion pounds; production per cow was near the record level. Farm poultry produced eggs at a record rate per layer, but the number of layers averaged 8 percent less than in 1944. Farm production of eggs in 1945 was expected to reach 4.6 billion dozen—second only to the 1944 record.

Some Results of Agricultural Research. Shortly after Pearl Harbor, the Surgeon General's Office of the Army requested the Bureau of Entomology and Plant Quarantine to conduct studies on the fumigation of clothing and personal equipment because of the need for a more efficient method than steam sterilization for freeing servicemen from all stages of body lice, the carrier of typhus. Within a few months specialists in the Bureau of Entomology and Plant Quarantine demonstrated that all stages of body lice could be killed by relatively short exposure to methyl bromide gas, at any temperature. Practical methods of methyl bromide fumigation were developed and have been in use by the armed forces since 1943. These include individual fumigation bags for treating one soldier's outfit and demountable fumigation vaults for use in the field and at debarkation ports.

In the past four years more than a hundred new varieties of crop plants have been released to the public largely as the result of federal cooperation with State experiment stations. These varieties were mostly the culmination of previous work, but new methods made it possible to multiply seed supplies of many of them quickly. The new varieties included grains, forage crops, fruits and vegetables. A few were strictly the result of war-stimulated research; others became available more quickly than they would have done in peacetime.

For example the productive stiff-strawed Clinton variety of oats, now getting into big commercial production, started with 25 pounds of seed produced at Ames, Iowa, in July, 1943, and planted on irrigated land at Mesa, Arizona, in November 1943. From this planting about 2,000 pounds were harvested in April 1944. Sown May 20 on irrigated land at Aberdeen, Idaho, this additional seed pro-

duced 20 tons in August, only a little more than a year from the original harvest of 25 pounds. The 20 tons (or about 1,200 bushels) were planted by farmer seed growers in the Middle West in the spring of 1945. Some 40,000 bushels of Clinton oats (1,280,000 pounds) are available for 1946 planting.

Light on the delicate relation between mineral nutrition and the susceptibility of crops to certain diseases appears in reports of the Virginia Agricultural Experiment Station. Evidence presented points to the probability that a lack of sufficient potash may render corn plants more susceptible to damage from bacterial wilt by reason of the resulting accumulation of nitrate in the water-conducting tubes of the corn stem. Deficiencies of other elements are thought to have a possible bearing on the disease reactions of various plants and on their reactions to parasites that invade the water-carrying elements in the wood.

Work of the New Jersey Agricultural Experiment Station, a pioneer in studies of antibiotic substances produced by micro-organisms, has brought fourth evidence that the production of penicillin is not confined to any one species of fungus or even to the mold genus *Penicillium*, and that the conditions favoring maximum yields differ with the species or strains involved, most of which also produce a second antibiotic factor. Furthermore, this Station has isolated and described six other antibiotic substances produced from the soil, viz., actinomycin, clavacin, fumigacin, streptothricin, streptomycin, and chaetomin. Of these, the two showing the most promise are streptothricin and streptomycin.

In tests of penicillin by the Arizona Station against plant pathogenic bacteria, crown galls induced by bacterial inoculation were destroyed by wrapping antiseptic cotton soaked in crude penicillin around them after puncturing the galls in numerous places with a sterile needle. The method is suggested for trial on nursery stock and set trees and on other plants with galls limited to aerial parts.

The feeding of a ration of cull beans and alfalfa to ewes during gestation and lactation resulted in a high percentage of offspring affected with stiff-lamb disease, in experiments by the New York (Cornell) Station. Administration of two doses weekly of 9 ml. per ewe of an 8.25 percent solution of mixed tocopherols in cottonseed oil starting 24 days before the first lamb was born prevented the occurrence of this disorder in any of the lambs. Furthermore, lambs from ewes on the unsupplemented diet, when treated with 2 ml. of an olive oil solution of 140 mg. alpha-tocopherol acetate, were protected against the disease. Subcutaneous injection of an aqueous solution of an alpha-tocopherol compound also proved efficient for treating affected lambs.

Scientists have recently found that certain so-called growth-regulating substances, called hormones, are useful as herbicides. They will kill some plants and not others. Studies have shown great promise as a weed killer for one of these substances—2,4-Dichloro-phenoxyacetic acid. A method devised by the Bureau of Plant Industry, Soils, and Agricultural Engineering, and tested in collaboration with State agricultural experiment stations and the U. S. Golf Association, has shown good results on lawns, golf courses, grain fields, and areas bearing other plants of the grass family, though it is not yet recommended for pastures. It does not hurt Kentucky bluegrass or weed grasses such as crab grass and quack grass; yet it affects bent

grasses and White Dutch clover, as well as a considerable list of weeds.

Correcting Mineral Deficiencies Increases Beef Production. Experiments in federal and State agencies showed that one way to step up beef production in some range areas is to feed phosphorus supplements to breeding cattle. Especially in the Gulf Coast region much of the vegetation available for grazing is deficient in this mineral. Correcting the deficiency results in more and better calves. Early results of cooperative investigations in southern Texas showed that feeding bonemeal and disodium phosphate to cattle, by hand dosing, was beneficial in two ways. It prevented the onset of phosphorus deficiency and, in animals already affected, corrected it if not too far advanced.

ARTHUR P. CHEW.

AGRICULTURE, U.S. Department of. A Department of the U.S. Government, created by Act of Congress, May 15, 1862, and directed by law to acquire and diffuse useful information on agricultural subjects in the most general and comprehensive sense. The Department performs functions relating to research, education, conservation, marketing, regulatory work, and agricultural adjustment. It conducts research in agricultural and industrial chemistry, the industrial uses of farm products, entomology, soils, agricultural engineering, agricultural economics, marketing, crop and livestock production, production and manufacture of dairy products, human nutrition, home economics, and conservation. It makes research results available for practical farm application through extension and experiment station work in cooperation with the States.

The Department provides crop reports, commodity standards, Federal meat inspection service, and other marketing services. It seeks to eradicate and control plant and animal diseases and pests. It administers more than 50 regulatory laws designed to protect the farmer and consuming public, and enforces the Sugar Act of 1937 and the Commodity Exchange Act, June 15, 1936. It promotes the efficient use of soils and forests. It provides rural rehabilitation, and guarantees farmers a fair price and a stable market through commodity loans and marketing quotas. It also provides agricultural credit, assists tenants to become farm owners, and facilitates the introduction of electric service to persons in rural areas.

Changes During War Years. Early in the war period the Department of Agriculture functioned as a food administration though without any formal order. On December 5, 1942, President Roosevelt by an executive order made it officially responsible. This order, which announced a reorganization of the Department, placed all Department agencies concerned with food production under a Director of Food Production and grouped all department agencies concerned with food processing, storage, allocation, and distribution under a Director of Food Distribution. In March, 1945, by another executive order, this arrangement gave place to a new delineation of wartime food responsibilities. Parts of the existing food production and food distribution administrations became the War Food Administration, which managed the war food job until June 30, 1945, when by its own request the President abolished it and merged its functions with those of the Department of Agriculture.

Subsequently the Secretary of Agriculture, Clinton P. Anderson, announced the appointment of a Committee on Departmental Reorganization. On the advice of this committee the Secretary announced the establishment of a Production and

Marketing Administration which was, in effect, a consolidation of the following agencies: Office of Basic Commodities, Office of Supply, Office of the President of the Commodity Credit Corporation, Offices of the Manager and of the Secretary of the Federal Crop Insurance Corporation, Office of Marketing Services, Agricultural Adjustment Agency, Office of Requirements and Allocations, Office of Price, Office of Transportation, Office of Materials and Facilities, Office of Labor, Office of Home Food Supply, Office of Investigatory Services, and the liquidating Federal Surplus Commodities Corporation.

Principal agencies of the Department include the following: The Agricultural Research Administration, which directs and supervises most of the scientific research activities of the Department. Agencies which report to ARA include: the Bureau of Agricultural and Industrial Chemistry, the Bureau of Animal Industry, the Bureau of Dairy Industry, the Bureau of Entomology and Plant Quarantine, the Bureau of Human Nutrition and Home Economics, the Bureau of Plant Industry, Soils, and Agricultural Engineering, the Office of Experiment Stations, and the Agricultural Research Center of Beltsville, Maryland.

Other important agencies of the Department are: the Extension Service which cooperates with State agricultural agencies in education programs; the Farm Credit Administration, organized to provide a complete credit service for farmers and farmer cooperative associations; the Farm Security Administration, which makes loans and gives technical supervision to family-type farmers unable to get sufficient credit elsewhere; the Forest Service; the Rural Electrification Administration; the Soil Conservation Service; the Bureau of Agricultural Economics; and the Office of Foreign Agricultural Relations.

Legislative Basis of Action Agencies. In 1929 the Agricultural Marketing Act was passed, followed by the establishment of the Farm Board. The Foreign Agricultural Service Act was enacted in 1930. Enactment of the Agricultural Adjustment Act May 12, 1933, resulted in the setting up of many "action agencies" in the Department. This act was designed to establish and maintain such balance between the production and consumption of agricultural commodities, and such marketing conditions therefor, as would reestablish prices to farmers at a level that would give farm products the purchasing power they had in specified earlier base periods. The base period for most commodities was 1909 to 1914.

Subsequent legislative acts authorized other parts of the Department's action program. These measurements included: the Emergency Farm Mortgage Act of 1933; the Farm Credit Act of 1933; the Federal Farm Mortgage Corporation Act and the Jones-Costigan Sugar Act of 1934; the Soil Conservation Act of 1935; the Soil Conservation and Domestic Allotment Act, the Rural Electrification Act, and the Flood Control Act of 1936; the Agricultural Marketing Agreement legislation; the act placing functions of the Federal Surplus Commodities Corporation in the Department; the Bankhead-Jones Farm Tenant Act; the Norris-Doxey farm forestry legislation; the Pope-Jones water-facilities legislation; and the Sugar Act of 1937; the marketing-agreements and surplus-diversion programs, authorized in 1937-38; and the Flood Control Act, the Agricultural Adjustment Act, and the Federal Crop Insurance Act of 1938.

ALASKA. The territory of Alaska lies in the far

northwest corner of the North American continent and includes the Aleutian Islands which extend westward more than 1,200 miles toward the Kamchatka Peninsula. The area of Alaska, inclusive of inland waters, is approximately 586,400 square miles or approximately one-fifth the area of continental United States. Three-fourths of Alaska is in the North Temperate Zone.

Government and Political Status. Although Alaska was purchased from Russia in 1867 for \$7,200,000 it did not become an "incorporated Territory" until 1912 when Congress passed an "Organic Act" creating the Territory of Alaska. Under its terms the Territory does not merely belong to the United States, but is a part thereof. The Constitution and laws of the United States are automatically in force with the exception of certain provisions which are clearly not applicable. The head of the Territorial Government is Governor Ernest Gruening who was appointed by the late President, F. D. Roosevelt in 1939 for a four-year term, which has since been renewed. In addition, there is a Territorial Legislature which meets for a period of 60 days biennially beginning with the fourth Monday in January of uneven years. Commencing with the 1945 session the number of members in this body has been increased to include 16 senators and 24 representatives. A delegate (Edward L. Bartlett) is elected by Alaskans every two years to represent Alaska in the U.S. Congress. He is empowered to prepare and introduce legislation, and act as a member of Committees, even though he has no vote. The administration and supervision of such functions as health, welfare, education of natives, expenses of the legislature, and judiciary, has not been delegated to the local government, but has remained a Federal function. There are as many as 50 Federal agencies participating in the management of Alaska's affairs.

Events, 1945. Interest in Alaska has been greatly stimulated since the realization of its importance as an outpost for national defense through its "discovery" by the hundreds of thousands of servicemen and civilians who have been stationed there during the war, and by others who are looking for adventure, free land, and the opportunity to make a fortune in America's last frontier. More than 3,000 letters a month have been received by the U.S. General Land Office from veterans who are anxious to learn about the possibilities for settlement and homesteading. Of great interest to prospective settlers is the fact that only 2,321,000 out of 365,841,000 acres have been surveyed. Thus many of them feel that the natural wealth of Alaska has only been sampled but not thoroughly appraised.

Accompanying this renewed interest in Alaskan settlement and colonization, is the agitation for granting Statehood to the Territory. In the early part of the year the Alaskan Legislature provided for a referendum being taken in the fall of 1946 at the general election on the question of Statehood. Mr. Bartlett, the Territorial Delegate, introduced a bill in the U.S. House of Representatives which provides for Alaska becoming a State. President Truman and Secretary Ickes are supporting this bill for they both feel that Statehood would speed the development of Alaska's resources and encourage settlement. Representatives Johnson (D) of Oklahoma and Rooney (D) of New York, members of the Congressional Subcommittee on Interior Department Affairs of the General Appropriations Committee, who visited Alaska during the summer, believe that the people of Alaska are not ready for Statehood or capable of governing themselves.

Moreover they believe that absentee owners of the fishing and mining industries exert too much influence in the Legislature and are responsible for the absence of territorial taxes on personal and corporate incomes, property, gasoline, and banks, thus enabling them to spend only \$1,000,000 out of \$60,000,000 annually toward the economic development and betterment of Alaska. As a result of this liberal tax policy, the Federal Government is the main contributor towards health, schools, and roads.

In spite of these claims of immaturity and incompetence, the Alaskan Legislature passed an Equal Rights bill which should prove to be a significant step in Alaskan history. It provides that "all citizens of Alaska shall be entitled to the full enjoyment of accommodations, advantages, and facilities of any public place." In accordance with this law, no person shall display any printed or written signs indicating a discrimination on racial grounds of such full and equal enjoyment. Violation of this law would bring a jail sentence of three months and a fine of \$250. The Legislature which passed this bill included two full-blooded Indians among its membership.

Seabees, numbering about 200, began drilling for oil on the first test well, within the Arctic Circle, at Umiat on the Colville River, 180 miles from Pt. Barrow (1,100 miles from the North Pole). About 35,000 square miles are involved in this project which is known as Naval Reserve No. 4. With the cessation of hostilities numerous projects are being abandoned in Alaska as war casualties or white elephants. The Alcan highway, which totalled 1,700 miles of roadway and cost the War Department approximately \$50,000,000, and the shipping base at Excursion Inlet, 65 miles southwest of Juneau, which cost \$17,000,000 were given much publicity.

Population. According to the 1940 census the population of Alaska was 72,524 of which whites numbered 40,066 and natives (Indians and Eskimos) 32,458. Eskimos accounted for 15,576, Indians for 11,283 and Aleuts for 5,599. The population of Alaska in 1945, excluding members of the armed forces, was estimated at 85,000. Juneau, the capital of Alaska, had a population of 5,729 in 1940.

Education. Alaska has two school systems, one for white children and those of mixed blood, called the Territorial Schools, and the other for natives (Indians and Eskimos) known as the Native Schools. In the case of the former the Territory has full responsibility for the control, administration, and financing of education whereas in the latter the Federal Government, through the Office of Indian Affairs, assumes the educational burden. The University of Alaska, founded in 1922, had a total of 894 students enrolled in 1943-44. There were 12,019 students enrolled in the primary and secondary schools during 1943.

The Economy. The leading industries of Alaska in order of their importance are fishing, mining, and fur farming. The value of manufactured fishery products in 1943 was \$66,516,217. Salmon fishing and packing account for 80 percent of the people employed in Alaska. The normal annual salmon pack for Alaska runs 6,000,000 cases (of 48 one-lb. cans). Alaska alone accounts for 60 percent of the world's supply of salmon. There are about 100 canneries devoted to this industry and they employ about 20,000 laborers. The center of the salmon industry is Ketchikan. Other fish caught in Alaskan waters and marketed commercially are herring, halibut, crabs, etc.

Mining which ranks second in importance as an industry has been seriously curtailed during World War II. The average annual output of mineral resources during 1939-1942 was \$25,000,000. In 1943 there was a decline in mineral production to \$9,326,000. Gold, the leading mineral export, ranks second to salmon exports, but in 1943 gold mining was seriously curtailed and only \$3,485,405 produced in contrast with \$17,000,000 (1942) and \$24,000,000 (1941). Other minerals mined in Alaska include coal, mercury, silver, copper, lead, and platinum.

Alaska's third leading industry is fur farming and the sale of furs derived from trapping. The production of furs during 1944 amounted to \$1,700,000. Mink pelts and sealskins are the two leading products. The Pribilof Islands account for 85 percent of the world's supply of sealskins.

Commerce and Foreign Trade. The total commerce between the United States and Alaska since 1867 has been estimated to exceed \$3,400,000,000, with minerals accounting for approximately \$830,000,000. Exports of Alaskan products to the United States from 1942 to 1944 totaled \$56,000,000, \$70,000,000, and \$68,000,000 respectively. Canned salmon accounted for \$46,000,000, \$52,000,000, and \$50,000,000 or 76 percent of the total export trade. Other fresh or frozen fish products, such as halibut, salmon, cod, and herring, accounted for approximately 14 percent, with furs and skins and gold bullion accounting for the greater portion of the remaining 10 percent. Imports from the United States by Alaska totaled \$89,000,000, \$74,000,000 and \$64,000,000, respectively. The principal imports were vegetable food products, beverages, machinery, vehicles, metals, and manufactured goods.

Agriculture. The three principal farming areas in Alaska are located in the Kenai Peninsula (Homer Area), Tanana Valley (near Fairbanks), and the Matanuska Colony (near Palmer). The products grown are largely for local consumption, i.e. grains, vegetables, foodstuffs, livestock, dairying, poultry, and hog raising. All crops common to North America also thrive except corn, tomatoes, and orchard fruits. One of the most interesting experiments in agricultural colonization ever undertaken under Government sponsorship is the Matanuska Valley Colonization Project, fifty miles from Anchorage at the head of Cook Inlet. Of the 200 families who in May, 1935, migrated from Minnesota, Wisconsin, and Michigan only 58 remained throughout the initial period of hard toil and little return. To date approximately 7,000 acres have been cleared under trying conditions, but there have been good results for potatoes, lettuce, cabbage, etc., which are moved to Alaskan cities in carloads. The U.S. Army, particularly Fort Richardson which is located at Anchorage, purchased \$750,000 in produce from Alaskan farmers during 1943. The growing season in Alaska lasts for about 115 days.

Livestock. Reindeer outnumber all other types of livestock raised in Alaska. In 1944, there were 170,000 head of reindeer of which two-thirds were owned by Indians and Eskimos. This industry is administered by the Office of Indian Affairs, in the Department of the Interior, primarily for the benefit of Alaska's natives. Other livestock include horses, cattle, hogs, and poultry.

CHARLES F. REID.

ALBANIA. A Balkan country on the east shore of the Adriatic Sea. Area: 10,629 square miles. Population: 1,083,000 (Jan. 1, 1940). Chief towns:

Tirana (capital), 30,806 inhabitants in 1930; Scutari (Shkodër), 29,209; Koritsa (Korçë), 22,787; Elbasan, 13,796; Durazzo (Durrës), the chief port, 8,739.

Education and Religion. Primary education is nominally compulsory, but illiteracy remains high. The population, by religions, included 688,220 Moslems, 210,313 Orthodox Christians, and 104,184 Roman Catholics.

Production, etc. Albania's chief products are corn, wheat, tobacco, olive oil, wool, petroleum, timber, hides, dairy products, and fish. There are deposits, still largely unexplored, of copper, chrome, and other minerals.

Transportation. The highway network extended 1,759 miles in 1940 (750 miles suitable for motor traffic), but this was badly disrupted by war in 1940-41. Construction of a railway between Durazzo and Elbasan, the first line in Albania, was begun in May, 1940.

Events, 1945. The central fact in the history of Albania in 1945 was the recognition accorded by the governments of Great Britain, the United States, and Russia on November 10 to Enver Hoxha's provisional government, which was an outgrowth of the Albanian resistance movement, called, since early 1944, FNC (Fronti Nacional Chirmtare). The movement was organized in September, 1942, as LNC (Levizje Nacional Chirmtare) to unite all resistance groups, irrespective of religious, political, or social issues. In time the more conservative, nationalist, and for the most part, propertied groups withdrew and were drawn into collaboration with the Germans. By 1944 LNC (soon changed to FNC) was the only active resistance movement in Albania, was clearly dominated by the Communist Party, and was strongly opposed by all other organized Albanian groups. Of these the chief was the Balli Kombetar, which objected to FNC's Communist leadership and Yugoslav Partisan connections.

In October, 1944, FNC had requested recognition by the Allies. The request was made more strongly in January, 1945, and repeated at intervals during the year, but the British seemed loath to alter their earlier attitude of suspicion of FNC and their policy of checking it by encouraging opposition. It was apparently thought that the strong Russian influence in Albania could be counterbalanced by the ML (Military Liaison) and UNRRA programs, but FNC showed suspicion of the great numbers and personnel of ML and UNRRA missions in Albania.

In March Brigadier Hodgson and a British Military Mission arrived in Albania, and in May the American observers whom Secretary Stettinius had agreed to send in March, but these missions did not imply recognition of FNC as a legitimate government. At first the British showed some enthusiasm for the FNC regime, but their later reports declared that it was high-handed and opposed by a considerable section of the people. The ML agreement concluded by Generals Hughes (Great Britain) and Sadler (United States) on April 11 marked a concession to FNC, but there were still grounds for suspicion. For example, the chief of the UNRRA mission to Albania was Major Oakley Hill, who had previously been British liaison officer to Abas Kupa, head of the Albanian opposition to FNC, and before that inspector of the Zogist gendarmerie. At the trials, held on March 1, of Bari Omari and Kol Tomara, leaders of the anti-FNC Balli Kombetar and former members of the German-sponsored Mitrovits cabinet, the chief defense was that the accused had been following

the instructions of the British. More important figures in Balli Kombetar, such as Abas Kupa himself, Mithat Frasheri, and Mehdi Frasheri, had either been evacuated by the British or had retreated with the Germans and had not been turned over to the Albanians for trial. Britain refused a request for the custody of Xhaver Deva, who had been responsible for the arrest and execution of a number of FNC sympathizers at the hands of the Germans. Abas Kupa, whom the British had taken to Bari, had gone to Cairo, where he was spreading rumors concerning the formation of a Zogist government with British support. The British suppression of the EAM uprising in Greece added to FNC suspicions, and when, upon conclusion of the Greek uprising by the Varkiza Agreement of February 12, the Rightist Greek press opened a campaign for the accession of Southern Albania, the Albanians were apprehensive that the British might support the Greek claims. FNC was convinced that the British representatives in Albania were sending adverse reports on their regime to London and were giving encouragement to FNC's enemies at home and abroad. In consequence they sharply restricted the movements of British personnel, requiring 48-hour notice and formal permission for any journey. At the end of June ML's decision to withdraw from Albania precipitated the disagreement between UNRRA, represented by Major Oakley Hill, and Enver Hoxha. The latter maintained that he should sign the agreement as the head of the Albanian state, and not, as Hill insisted, merely as commander-in-chief of the armed forces. Hoxha also wished UNRRA personnel to be limited to twelve, fearing that a larger number would devote themselves to British intelligence rather than to UNRRA work. Major Hill's position was that so small a number would not be able to assure that UNRRA supplies were not being put to military use or shipped to Yugoslavia. The impasse was solved by a compromise reached in September.

With Russia and with Yugoslavia, on the other hand, FNC's relations were most cordial. The greatest potential source for dissension with Yugoslavia, the question of the disposition of the Kosovo region, was settled by an amicable agreement reached in February whereby the region was to become an autonomous unit within federated Yugoslavia. The area, comprising some 12,600 square miles along the prewar Albanian-Yugoslav frontier, with a population of some 600,000, had long been the object of rival nationalist claims. Before the war it formed part of Yugoslavia, and though the Yugoslavs made strong efforts to colonize it, its population continued predominantly Albanian. In 1941, after the Axis invasion, the Kosovo region was annexed to Albania; and the Italians and Germans exploited the nationalist feelings of the Albanians in the area, so that FNC, because of its Communist leadership and its connection with Tito, was disliked. FNC forces moved into the region late in 1944 and were soon joined by Yugoslav troops, which were in effective control by early 1945. In July the Yugoslav government proclaimed the reincorporation of the Kosovo region, the south portion in the Yugoslav federal unit of Macedonia, the Kosovo-Metohiya area in the unit of Serbia, and the northwest portion in the unit of Montenegro. An acceptance of this action without public protest is a measure of the close relations subsisting between the regimes of Albania and Yugoslavia. Both governments are cooperating in a program designed to minimize frictions. Local government has been established on a joint

proportional basis; Albanian schools and newspapers are functioning; and an agrarian reform measure tends to bar the return of Serb colonists as well as divide large estates among the permanent residents. FNC's acquiescence has subjected it to criticism that it has betrayed Albanian national interests, and armed revolts against Yugoslav rule on the part of the Kosovars have been reported. But if the present harmony between the regimes continues, and if the final intention of the regimes is the creation of a Balkan federation (for which, indeed, the present solution of the Kosovo question is the best evidence), the tensions in the area will doubtless subside.

Relations with Russia have been as cordial as those with Great Britain were strained; FNC has received praise and encouragement from Russian propaganda agencies and has openly admired Russia and its institutions. Russia sent a military mission to Tirana in April, which served in lieu of recognition, and an Albanian military mission was received in Moscow, though London and Washington refused to accept Albanian military missions. During the summer two high-ranking members of the FNC's Communist inner circle, Koci Xoxe, chief of the FNC special police, and Bedri Spahiu, Minister of Social Welfare, were conferring with Soviet authorities in Moscow, and later a delegation of Albanian anti-fascist youth was fêted there. A Russian propaganda exhibition was opened in Tirana, and Russian correspondents and news photographers have been active in Albania. *Red Star* for September 21 published a long and laudatory article on Albania, approving FNC's record and its plans. Russian correspondents have also supported Albania against the territorial designs of Greek "fascists." Albania seems clearly to be moving into the Russian sphere and will probably be able to count on Russian support in any border dispute with Greece. Though Hoxha's petition to the Big Three on September 4 to afford Albania an opportunity to present its claims to the Council of Foreign Ministers went unheeded, Molotov's attack on the Greek regime was tantamount to a defense of Albania.

In the course of the year FNC has taken various steps to transform its provisional into a regular government. The position of Hoxha and his ministers was that all Albanians are automatically members of FNC; new political groups must therefore originate in FNC. Within FNC such non-communist leaders as Myshin Peza and Baba Faya Marteneshi enjoyed a certain popularity, but possessed neither acumen nor program for starting an effective opposition. In all government bureaus FNC exercised political control through the *pergegjes*, a species of political commissar. A well-attended and enthusiastic congress of FNC at Tirana during the first half of August was a step towards forming a regular government. On September 25 the National Liberation Council, the provisional governing body of Albania, discussed plans for a constituent assembly, and in October it was announced that elections would be held in December. As in Yugoslavia and Bulgaria, the franchise was given not only to women but to all over eighteen; only persons mentally deficient or who have forfeited the rights of citizenship, presumably by collaboration with the enemy, may not vote or be elected. In view of FNC's control of army, gendarmerie, and administration, and the enthusiastic support of well-organized women's and youth groups, FNC's success at the elections was as complete as had been generally expected.

The internal program announced by FNC is

moderate, in view of its leftist professions, the chief objects being to end exploitation by foreign capital and by native "feudalism." Concessions granted by former regimes to foreigners for exploitation of surface and subsurface soil were annulled, as was financial control by Italian banks. Mines and refineries were put under government administration. Agrarian reforms envisaged the distribution of large estates and properties of collaborators to peasants, so that none should be without his own land. Taxes were to be direct, and especially heavy on those who were enriched by the war. Veterans were to receive benefits, but Zogist pensions for useless clients were cancelled. The welfare of the people was to be the prime concern of the government, but private property and private enterprise were to be respected and guaranteed. A degree of moderation was shown also in the penalties meted out to collaborators at trials held in April. Of sixty defendants two were acquitted, twenty-three received death sentences, and the rest prison terms. The defendants pleaded that they were motivated by abhorrence of communism, by encouragement of British liaison officers, by a conviction that resistance would bring destruction upon Albania without materially aiding the Allies, and by despair at the earlier betrayal of small countries by England and France.

ALIEN PROPERTY CUSTODIAN. Office of. A war agency within the Office for Emergency Management, established by executive order of Mar. 11, 1942. The Alien Property Custodian has the power to direct, manage, supervise, control, or vest property of nationals of enemy or enemy-occupied countries.

The Office has taken title to more than 44,000 patents and patent applications formerly owned by nationals of enemy countries and enemy-occupied territories. The liquidation of vested property, except patents, is being effected through a program of public sales. The patents are being licensed to American industry, as applications are received, on a nonexclusive, royalty-free basis for the life of the patent. Alien Property Custodian: James E. Markham.

ALSACE-LORRAINE. The two border provinces annexed by Germany after the Franco-Prussian War and returned to France by the Versailles Treaty (June 29, 1919). They were reoccupied by German troops in June, 1940, and placed under German civil administration on or about Nov. 30, 1940. Area, 5,605 square miles; population (1936 census), 1,915,627. Lorraine was merged with the Saar district (Saarpfalz) to form the German province of Westmark. The provinces were occupied by Allied armed forces in 1944 and returned to France where they comprise the following departments: Bas-Rhin (1,848 sq. mi.; pop. 711,830), Haut-Rhin (1,354 sq. mi.; pop. 507,551), and Moselle (2,403 sq. mi.; pop. 696,246).

ALUMINUM. Declining military aircraft production and other war demands caused a drop in United States primary aluminum production to about 1,000,000,000 lb. in 1945, (1944, 1,552,892,000 lb.). During the war nearly two-thirds of total aluminum production had been used by the aircraft industry.

This sharp drop in demand and the end of the war left the United States with an annual metal-making capacity of 2,350,609,000 lb., over one-half of it owned by the federal government. Disposal of large surplus government-owned plants

constituted a problem which had not been completely solved at the end of the year. The Surplus Property Board, later succeeded by a single administrator, was restricted in formulating a disposal program by a final court ruling that the Aluminum Co. of America (Alcoa) had as of 1940 had a monopoly on the production of aluminum ingot in violation of the Sherman Act. The Court, sitting as a court of last resort, also indicated that the success of the plant disposal program in fostering competition within the industry would be "at least one condition as to the propriety of dissolution" of Alcoa. Of privately owned annual production capacity totalling 989,857,000 lb., Alcoa holds 828,127,000 lb. and Reynolds Metals Co., a new producer in 1941, 161,730,000 lb. The government plants have a total annual capacity of 1,360,752,000 lb. of which, during the war, Alcoa was charged with operation of 1,320,564,000 lb. and Olin Corp. 40,188,000 lb.

The process of making metallic aluminum involves the mining of bauxite ore ($\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$), converting it to alumina (Al_2O_3), and reducing the alumina to metallic aluminum. Most bauxite is imported, principally from Dutch Guiana, but lower grade ore is available in limited quantity from Arkansas deposits. The key unit in the surplus plant disposal program was indicated by the Surplus Property Board to be a large alumina plant located close to the Arkansas deposits at Hurricane Creek. When the war ended the government had built up a bauxite stockpile there which, with new locally mined ore, could tide a new aluminum producer over for eight or ten years until foreign sources could be arranged. In December the government leased the Hurricane Creek alumina plant and the Jones Mills, Ark., aluminum reduction plant, located 20 miles away, to Reynolds Metals Co. Reynolds, whose lease runs for five years, agreed to sell alumina produced at Hurricane Creek above its own needs to other aluminum producers at cost plus 6 per cent.

Of the seven remaining government owned aluminum metal plants, the Surplus Property Board saw little hope of leasing or selling more than two, located at Troutdale, Ore., and Spokane, Wash., respectively. Reynolds has indicated interest in these plants also. During the war, only the Jones Mills, Troutdale and Spokane plants had production costs below the current market price of 14 cents per pounds for aluminum pig.

Lack of interest in acquiring the plants, prospective operators said, lay in high operating costs of the government plants in relation to shrunken postwar markets for aluminum at present prices. Reduction in aluminum metal prices was acknowledged by the Surplus Property Board, itself, to be necessary to develop fully markets for the metal in the automobile, railroad, truck, construction, and manufacturing fields in competition with such metals as steel selling for less than one-fifth as much per pound. The established competitive position of Alcoa and the Aluminum Company of Canada, which operates the world's largest aluminum plant in Quebec, also deterred bidding on the surplus American plants, testimony indicated.

In addition to its primary metal plants and fabricating plants, representing an investment of \$739,000,000, the government faced the problem of disposing of nearly 1,500,000,000 lb. of aluminum scrap resulting from the war. Close to 1,000,000,000 lb. will come from wrecked and obsolete aircraft, 70 per cent of whose weight is aluminum. Use of much of this wartime scrap is limited by its high alloy content of other metals, which restricts

its principal field of use, when melted down, to castings and extrusions.

Stocks of primary aluminum metal held by the government through Reconstruction Finance Corporation were, as of Oct. 31, 1945, 385,140,355 lb., and of secondary (remelted scrap) metal 6,223,108 lb.

At the end of 1944, the United States had 41.6 per cent of world aluminum capacity; Canada, 19.8 per cent; Germany, 9.7 per cent; Japanese empire, 7.5 per cent; France, 4.4 per cent; Austria, 4.1 per cent; Russia, 2.9 per cent; Italy, 2.5 per cent; British Isles, 2.2 per cent.

CHARLES T. POST.

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Charles Sawyer, M	Luxemburg Mr. Hugues Le Gallais, M 2200 Massachusetts Ave., L		
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Stanley K. Hornbeck, A	Netherlands Dr. A. Loudon, A 1470 Euclid St., E		
Kenneth S. Patton, M	New Zealand Mr. O. A. Berendsen, O.M.G., M 19 Observatory Circle, L		

AMERICAN LEGION. The. An organization of American veterans of both World Wars I and II. It became a two-war organization, Oct. 29, 1942, when President Roosevelt signed Public Act 767, making honorably discharged veterans of World War II eligible for membership. By the close of 1945 more than 600,000 World War II veterans had enrolled. The 27th national convention in Chicago, Illinois, Nov. 18 to 21, 1945, remained a streamlined affair

because of transportation and housing conditions, with official attendance restricted to 2,032 delegates and to national officers and key committeemen. The outstanding declaration of the convention was the formulation of a specific American Legion plan of universal training for national security. It provided for a year's military training for all young men between the ages of 18 and 20 years, to be divided into two periods. The first period called for four months of basic training. The trainee then would have several options for completing the remainder of the required training or its equivalent: (1) to go on to college and train with the ROTC; (2) to continue with his business career and enlist in the National Guard for three years, or a functioning unit of the organized reserves; (3) to be elected, if qualified, for advanced technical or scientific training which might be given in the armed forces, in special Army or Navy schools or other institutions especially selected where certain courses are given under Army or Navy direction, or in industry where special schools have been provided; (4) to volunteer for a term of enlistment in the Regular Army, Navy or Marine Corps; or (5) to complete a year of training with the armed forces as provided by those forces.

The national executive committee in Indianapolis, Dec. 13 to 15, 1945 designated the major legislative program of The American Legion to be (1) the problems of rehabilitation, hospitalization and service to the returning veterans, particularly those suffering from disability or sickness; (2) the problems of economic reestablishment of veterans and their re-integration into community life, with particular stress on employment and housing; and (3) a sound military defense program in which "universal military training of the youth of this republic shall be a basic part."

War Effort. Accomplishments in 1945 included sales in Legion drives of hundreds of millions of dollars worth of war and victory bonds, record collections of waste paper, scrap metals, and other vital materials; and promotion of blood banks.

Special services to armed forces included distribution of phonograph records, playing cards, booklets, hospitality cards, and hometown newspapers. The American Legion collected more than 1,300,000 gifts for hospitalized servicemen and veterans through its nation-wide "Gifts for Yanks Who Gave" Christmas program.

Rehabilitation. Chief accomplishment in this field was the liberalization of the Legion G.I. Bill of Rights for World War II veterans, through Legion-sponsored amendments providing increased benefits and reducing much of the administrative red tape which hampered operations of the law; and a vast expansion of the Legion's rehabilitation service machinery, on the State levels as well as nationally, to render every possible assistance to returning veterans, particularly the disabled.

Child Welfare. There was further expansion of Legion aids and services to children of World War II veterans and a great increase in the Legion's child welfare machinery.

Internal Organization. During 1945 the Legion modernized its publicity machinery through the establishment of a new national division of public relations with adequate press, radio, movie, and magazine staffs backed by a 1946 budget of more than \$333,000. Branch offices are in Washington, D.C., New York City, and Los Angeles.

During 1945 the Legion reached a new high in membership, exceeding the previous record by 241,819. On December 31, 1945, there were 1,667,742 members. Posts numbered 13,041, a gain of

800. The Auxiliary also reached a new peak of 634,822, for a gain of 62,412. Units numbered 9,765. The Sons of The American Legion closed the year with 46,258 members in 3,488 squadrons. The Forty and Eight established a new record with 64,016 members in 750 voitures. The Eight and Forty climbed to 10,132 in 294 salons.

The American Legion has two national publications, *The American Legion Magazine* and *The National Legionnaire*, with combined circulations of more than 3,335,000, as well as approximately 300 weekly, semi-monthly, and monthly State, district, county, and post news organs. The national public relations division issues a weekly American Legion news clip sheet going to a mailing list of some 20,000 daily, weekly, radio, labor, and college publications.

National Commander for 1945-46: John Stelle of McLeansboro, Illinois. National headquarters are at 777 North Meridian Street, Indianapolis, 6, Indiana. Legislative, rehabilitation, and employment director offices are maintained in the Legion-owned building at 1608 K Street, N.W., Washington, D.C.

ANDORRA. A small republic in the Pyrenees between France and Spain, under the joint suzerainty of the French chief executive and the Spanish Bishop of Urgel. Area, 191 square miles; population, about 6,000. Capital town, Andorra. The language spoken is Catalan. Sheep rearing is the main occupation of the people. There is a governing body called the council-general consisting of 24 members elected for 4 years (12 elected every 2 years). The council-general nominates the First Syndic (President) and Second Syndic (Vice-President).

ANGLO-EGYPTIAN SUDAN. A territory under British-Egyptian condominium in northeast Africa, lying south of Egypt in the middle and upper watershed of the Nile River. Area, 967,500 sq. mi. approximately (some of the frontier has not been delimited exactly). Capital, Khartoum.

Government. Sovereignty is shared between Great Britain and Egypt, a fact symbolized by flying the flags of the two countries together over public buildings. The Governor-General is nominally an appointee of the Egyptian Government but is in practice an important British civil or military personage. Other high officials are also British, though in recent years more Sudanese have been admitted to the lower administration (4,020 of them were in such posts in 1944). Assisting the Governor-General there is a Council for the whole area, and for the Northern Sudan an Advisory Council (set up in 1943) of local dignitaries for consultation. The southern Sudan is not regarded as sufficiently advanced politically for representative institutions. The judicial system makes provision for Mohammedan courts where Moslem law is applied. The country's defense is entrusted to the Sudan Defense Force. Units of this body participated in the reconquest of Ethiopia in 1941.

Events, 1945. The year was marked by continued Egyptian agitation for the annexation of the Sudan, as in the communiqué issued by the Nokrashi Cabinet in Alexandria on Sept. 23. Apparently the Egyptian Government was anxious lest the rise of Sudanese nationalism sever the ties binding the two countries. Egypt also put forth a claim for the Italian colony of Eritrea—to be annexed to the Sudan—in a statement made by Foreign Minister Abdul Hamid Badawi Pasha on Sept. 25.

During the May session of the Northern Sudan

Advisory Council the Governor-General announced a twenty-year plan to increase educational facilities so that Sudanese can eventually reach the top of the administrative ladder. In February an important step had been taken in this direction when Gordon College in Khartoum (founded in 1902) became independent of the government and subject to its own ruling body. The next step will be to make it a university college. Its faculty, British and Egyptian, has as its object the creation of such a Sudanese University from which can come the men who will make Sudanese self-government a reality.

The Population and Its Economy. Estimates of the population vary from 6,000,000 upward. In the northern, or open, part of the country the population is Arabized and Moslem; in the south it is largely pagan and more truly African in culture and race. Important centers are Khartoum, Omdurman, Wadi Halfa, Port Sudan (on the Red Sea), Kassala, El Obeid and El Fasher.

Some four-fifths of the world's gum arabic comes from the Sudan (exports in 1938: 23,989 tons). High-grade cotton is produced in increasing quantities: over 400,000 acres under cultivation in 1941-2, from which 60,000 tons were exported. More than half of this acreage is in the Gezira Irrigation Scheme, to be taken over by the Government in 1950. Other vast producing areas merely await the construction of dams and irrigation systems. Livestock statistics for 1944 were: 3,195,000 cattle; 4,808,000 sheep, 3,991,000 goats; 1,109,000 camels. There is little mining or lumbering and almost no industry. Communications are afforded by government steamers on the Nile and its tributaries, some 2,000 miles of railroad and a meager highway system.

ROBERT GALE WOOLBERT.

ANIMAL INDUSTRY, Bureau of. A Bureau of the U.S. Department of Agriculture, established in 1884, which deals with the eradication and control of animal diseases and parasites, conducts research on the production of livestock and their products, and otherwise seeks to protect and develop the livestock, meat, poultry, and related industries. During the war the Bureau furnished consultants and otherwise assisted in plans for providing adequate supplies of meat, wool, and other animal products needed by military services and lend-lease agencies. Chief: A. W. Miller.

ANTI-NARCOTICS LEAGUE. The international control of the dangerous drug traffic which the League of Nations had developed highly after World War I seemed during 1945 to be the League activity best surviving World War II. The Permanent Central Opium Board stated, in an over-all Report, that, "broadly speaking, the direct control set up by the International Conventions has withstood the shock of war and most governments have supported the international control to a remarkable degree."

Substitution of the United Nations for the League of Nations, however, presented certain difficulties. The American Delegation at the San Francisco Conference, stressing the importance of the anti-drug work, urged that "everything be done to safeguard its continuing operation" through the United Nations. The Preparatory Commission was given instructions in this sense, which the Central Board immediately noted "with great satisfaction" and with certain specific suggestions. Shortly after, the Executive Committee in London drew up detailed recommendations with a view to final action by the First Assembly in January. All this gave

vitality to the Central Board's hope that there be "no break or hiatus" in the transfer from the League to the United Nations.

Meanwhile, the daily work continued. The Central Board met in London as usual in war-years but the Branch Office which had functioned successfully in Washington since 1940 was returned to Geneva pending final arrangements. Information was received from 49 countries and 66 territories; the regular reports were issued; several new ratifications were received; and, most notable single event, France notified the League of the "absolute prohibition of opium-smoking in all territories of the Far East under French authority," primarily French Indo-China.

ARTHUR SWEETSER.

ANTITRUST DIVISION. A Division of the U.S. Department of Justice charged with the enforcement of the antitrust and 30 kindred acts. The Division receives complaints and, in cooperation with the Federal Bureau of Investigation, conducts investigations which, where appropriate, lead to criminal prosecutions or suits in equity designed to break up monopolies, restraints of trade, cartels, agreements with foreign corporations, and restrictive patent arrangements. The Small Business Section of the Division receives complaints and appeals for help from small business concerns throughout the country and, when justified, represents their interests before other Government agencies. If the investigation indicates a violation of the antitrust laws, this Section recommends appropriate action by the Division. Assistant Attorney General in charge: Wendell Berge.

AQUEDUCTS. Canals, pipes, conduits and tunnels are included in aqueducts which are features of important postwar projects for municipal and industrial water supply, irrigation and hydroelectric developments. For the water supply of San Diego, Calif., and the adjacent U. S. Naval Station a 72-mile aqueduct is being built to bring Colorado River water from a connection with the existing aqueduct of the Metropolitan Water District of Southern California to the city's new San Vicente reservoir. It will be 42 to 93 in. in diameter, and is to be completed in 1947. Its cost will be divided between the city and the U. S. Navy. In 1939 San Diego had a civil population of 197,000 and military population of 17,500; under war conditions these figures were increased to 360,000 and 100,000, respectively.

On the Owens River aqueduct of the above District, steel siphons 10 ft. in diameter were reinforced by ring girders and additional supports. Portland, Ore., plans a 36-inch pipe line from the Mt. Tabor reservoir to the city; Denver has started a 23-mile tunnel through the Continental Divide to bring an additional water supply from the Pacific slope, and Saginaw, Mich., plans a 70-mile aqueduct from Lake Huron.

An aqueduct of exceptional length is to bring Colorado River water for irrigation on the elevated plateau of Arizona, surrounding Phoenix. Three plans are being studied: (A) from the Marble Gorge, near the Grand Canyon, with 140 miles of tunnel to a series of power plants; (B) from the Bridge Canyon, above Boulder Dam, with 72 miles of tunnel to the Cunningham reservoir and then 260 miles of canal; (C) pumping water from the Parker Dam up 1040 ft. to the above reservoir and its canals. On the Deschutes Irrigation project, in Oregon, a concrete arch bridge carries a box flume or conduit across the Crooked River,

the top of the flume forming a road. Numerous aqueducts are included in projects of the U. S. Bureau of Reclamation.

In the Union of South Africa, the government plans a 50-mile irrigation aqueduct from the Orange River, at Bethulie, to the Brak River. The city of Cape Town, faced with a water shortage, plans a third pipe from the Steenbras reservoir. The city of Mexico, also with a water shortage, expects to complete in 1946 its 35-mile Lerma aqueduct, with 10 miles of tunnel.

Pipe-line projects are active for conveying oil, oil products, gasoline and natural gas. But the U. S. Government will sell some of the long steel pipe lines built for war service when the submarine was a hazard to tanker navigation. Among those to be sold are the "Big Inch" and "Little Big Inch" lines from Texas to points on the Atlantic seaboard.

Amazing in conception, construction and operation were the multiple pipe lines built by American and British army engineers from England to France to supply the mechanized troops in the great invasion. Four lines of 3-in. pipe were laid from the Isle of Wight to Cherbourg, and 20 lines from Dungeness to Boulogne. The flexible pipes were wound upon floating steel drums 40 ft. long and 40 ft. diameter, which were towed across the water, unwinding as they went. Another method was to lay the pipe from a cable-laying steamer.

During the war a secret pipe line was built across the Isthmus of Panama to serve the Pacific fleet in case of damage to the Panama Canal. It had two 20-in. lines for fuel oil, a 12-in. line for gasoline, and a 10-in. line for diesel oil. Extension to Fairbanks of the Canol oil pipe line built in Alaska and Canada by the U. S. Army, was halted in June, because of improved military conditions and the elimination of the submarine hazard in the Pacific Ocean. Begun in 1942, it runs 600 miles from the Mackenzie River to refineries at White Horse (Yukon), with distribution lines 110 miles to Skagway, 587 miles to Fairbanks, and 266 miles to Watson Lake. Canada has an option to purchase its part of the line, and the United States has the right to purchase a certain amount of oil.

An 1800-mile line from Calcutta, India, to Kunming, China, was completed in April, to serve mechanized equipment on the Assam-Burma-China war front. A curious development was the use of bamboo instead of small metal pipe in lengths of 15 to 20 ft. The first natural-gas pipe line in Russia is being built from Saratov, in the Urals, to Moscow, 500 miles away, and will be equipped with American machinery. Russia is building an oil line from Constanta, Roumania, to Odessa on the Black Sea, as an extension of the existing line from oil fields to Constanta. Steel pipe has been ordered to duplicate the present line across Iraq, and a line from the Persian Gulf to the Mediterranean, backed by American interests, will avoid the heavy tolls on tankers using the Suez Canal.

See DAMS, TUNNELS, WATER SUPPLY.

E. E. RUSSELL TRATMAN.

ARABIA. A large peninsula in southwestern Asia. Area, approximately 1,000,000 sq. mi.; population, upwards of 10,000,000. The political subdivisions are treated separately below. Other countries in the Near East with Arab-speaking populations, but not included under the heading "Arabia," are Egypt, Iraq, Lebanon, Palestine, Syria and Trans-Jordan. The various parts of Arabia may be divided into two broad political categories: independent

states, and territories under British sovereignty, protection or influence.

They are all inhabited by almost solidly Moslem populations, though of diverse sects. The ancient Arab stock, still overwhelmingly predominant in the interior, has been diluted with African, Indian, Iranian and other elements along the coasts. Nomadism has diminished greatly in recent decades, even in the desert interior, and today the population is largely sedentary. Education is still largely religious in nature and confined to males, except where British or missionary influence has been felt. Economically the region is probably on the threshold of a renaissance due to the billions of barrels of oil in its subsoil, now in process of exploitation.

The two independent states are Saudi Arabia and the Yemen.

Saudi Arabia. This state occupies the interior desert as well as some of the dry coastal regions on both the Persian Gulf and the Red Sea. It is primarily the creation of its present ruler, King Ibn Saud. Following the First World War he annexed the Kingdom of the Hejaz to his original state of Nejd, thus coming into possession of the Moslem Holy Cities of Mecca and Medina, the pilgrimages to which are in normal times lucrative sources of income. There are two capitals, Mecca and Riyadh. Theoretically there is also a distinction between the governments of the Nejd and Hejaz, since the former is an absolute monarchy while the latter is nominally under a constitution.

The estimated area exceeds 700,000 sq. mi., with a population probably in excess of 5,000,000. There are several cities and even a few seaports, notably Jidda; but by and large the population does not congregate in large urban centers. Various dialects of Arabic are spoken. Ibn Saud and his desert subjects are fanatical followers of the puritanical Wahabi sect. The population is racially not entirely homogeneous, since for many centuries there has been a trade in slaves from Africa that has inevitably introduced considerable Negro blood into many parts of the country.

Saudi Arabia has only recently started to become a part of the world economy through the discovery of large oil resources now being developed by the American-Arabian Oil Co., a subsidiary of the Standard Oil Co. of California and the Texas Oil Co. The royalties from this oil production are being used to construct roads, expand irrigated areas, and in general to open up the country. Both the export and import trades of Saudi Arabia are statistically unimportant except for crude oil. The small production of cereals and animals goes almost exclusively to satisfy the local markets.

Yemen. This country, sometimes referred to as Arabia Felix, contains some 75,000 sq. mi. and a population of around 3,500,000. It is ruled by an hereditary Imam, whose capital is at San'a. Unlike Saudi Arabia, much of the Yemen is high and fairly well watered. Agriculture is carried on extensively, with such crops as barley, wheat, millet, and coffee. Coffee has been the country's principal export, much of it coming out through the port of Mocha.

Until recent years the Yemen has been virtually inaccessible to Europeans, and even today few are allowed to penetrate into the country. In the same way, the Imam has pursued a policy of almost complete isolation from world affairs. However, the Yemen has become a member of the Arab League. The population is Arabic-speaking, with some Negro blood evident here and there. There are also remnants of once important Jewish communities.

Aden. This is the only British crown colony in

Arabia. It is located at the southwestern tip of the peninsula at the entrance to the Red Sea. The city of Aden, the capital, lies some 100 miles east of the Straits of Bab-el-Mandeb. The island of Perim, just north of the Straits forms part of the colony, which has an area of 80 sq. mi. and a population of over 50,000. It is administered by a Governor aided by an Executive Council. There are no representative institutions. The colony produces almost nothing for export, and its sole function in the British imperial scheme is as a naval and supply base along the short route to India. Such commerce as there is consists largely of transit trade. The barren terrain obliges the inhabitants to import even simple foodstuffs from elsewhere. In 1939, 2,004 merchant vessels stopped at Aden, as well as 1,455 local craft. The inhabitants represent a mixture of Arab, Indian, Somali, and other African peoples.

The Aden Protectorate. North and east of the crown colony there extends a vast area of some 120,000 sq. mi., known as the Aden Protectorate. It is largely desertic. The Protectorate is under the general supervision of the Governor of Aden, but the actual administration is left mostly in the hands of the local sultans. The Western Aden Protectorate is comprised of 19 Sultanates, of whom the Sultan of Lahej is the Premier Chief. The Eastern Aden Protectorate encompasses the Hadhramaut (containing the Q'aiti State of Shihr and Mukalla and the Kathiri State of Seiyun), the Mahri Sultanate of Qishn and Socotra, the Wahidi Sultanates of Bir'Ali and Balihaf, and the sheikdoms of 'Irqa and Haura. The population is probably around 600,000, most of which is concentrated in the coastal cities and in the fabulous skyscraper towns nestling in the interior valleys. Many persons of Negro ancestry are encountered in this region. Trade is on a local scale, though some of the more prominent families of the Hadhramaut have acquired fortunes in Malaya and the Dutch East Indies.

Muscat and Oman. Located in the easternmost corner of Arabia, this country is nominally an independent Sultanate. It is, however, definitely within the British sphere of influence, which is predominant throughout Southern Arabia and in the Persian Gulf area. There are more than 82,000 sq. mi. and probably 500,000 inhabitants. Most of these are Arabs, with Indians and Negroes represented in some of the coastal centers. Muscat is the capital, but Matrah is the principal commercial center for what little trade there is in the Sultanate. Most of the country is hot and quite barren, the principal exception being the higher regions around the Jebel Achdar where there is some cultivation. Dates constitute the principal product and export commodity, with rice coming first among the imports. Few vessels call at Muscat and internal communications are of a primitive sort. Few outsiders ever visit the country.

The parts of Arabia within Britain's sphere of influence run a wide gamut of political arrangements.

Trucial Oman. Lying north of Oman along the coast of the Persian Gulf is a relatively small area controlled by six petty rulers known as the Trucial Sheiks. Their external affairs are under the control of Britain, which is represented by a Political Officer and a Residency Agent for the Trucial Coast. Altogether this area contains no more than 100,000 inhabitants.

Qatar. A shiekdom comprising the peninsula of the same name in the Persian Gulf, with a population of probably 30,000 and an area of 8,500 sq. mi.

Its status *vis-à-vis* Great Britain is similar to that of the Trucial Sheiks.

Bahrein Islands. An archipelago in the Persian Gulf off the coast of Saudi Arabia. On Bahrein, the largest of the islands, there are oil wells and refinery installations owned by a subsidiary of the Standard Oil Co. of California and the Texas Company. There is some pearl diving and intensive agriculture, but the chief export is oil products. Bahrein is also the chief outlet for the trade of the neighboring parts of Saudi Arabia. There is a hereditary ruling Sheik who of course leans heavily on the advice of the British Political Agent. The population exceeds 120,000 and includes Persian, European and American communities.

Kuwait. A small territory of less than 2,000 sq. mi. wedged in between Iraq and Saudi Arabia at the northwestern corner of the Persian Gulf. The hereditary Sheik is assisted by an advisory council and a British Political Agent. The population probably exceeds 100,000. Oil was discovered in 1938 and its exploitation will undoubtedly greatly alter conditions here as it did in the Bahrein Islands.

Events, 1945. The outstanding political development of the year in Saudi Arabia was the emergence of that country from its diplomatic isolation. Hitherto Ibn Saud had been rather wary of becoming too closely involved in Pan Arab affairs—an attitude ascribed not only to his natural diffidence but to his jealousy of the reigning monarchs in Egypt, Trans-Jordan, and Iraq. Early in January it was authoritatively stated in Egypt that the Arabian King had decided actively to support the other Moslem states in the Near East in the organization of the Pan Arab League, and had agreed to accept the decisions of the Alexandria Conference of October 1944.

Betokening this rapprochement was the official visit paid late in January by King Farouk of Egypt to the Hejaz. Though this visit was officially described as being primarily social and religious in its import, it was inevitable that the two sovereigns should talk a great deal of politics during the week they spent together hunting and attending ceremonies at the Holy Places.

A month later Ibn Saud visited Mr. Roosevelt aboard an American cruiser in the Great Bitter Lake of the Suez Canal, during the President's brief stopover in Egypt on his way back to the United States from the Yalta Conference. This was the first time Ibn Saud had left his country since he had become King. He traveled up from Jidda in his royal tent pitched on the deck of an American destroyer! The conversations of the two men were officially reported to have been marked with cordiality and understanding, though the communiqué issued after their meeting was not very revelatory.

The real nature of their discussion came to light only on Oct. 18 when Secretary of State Byrnes made public an exchange of letters between the President and the Arab monarch. The latter, in a communication dated Mar. 10, gave a rather remarkable "history" of the Palestine problem going back to 3500 B.C., supposedly proving the Arab case in that endless controversy. He concluded by asserting that "All we ask is that the Allies should fully realize the rights of the Arabs and for the present prevent the Jews going ahead in any new matter which may be considered a threat to the Arabs and to the future of every Arab nation, in order that they, the Arabs, may be assured of justice and equity in their lands." The President's brief reply, dated Apr. 5, stated among other things that "Your Majesty will recall that on previous occasions I communicated to you the attitude of the

American Government toward Palestine and made clear our desire that no decision be taken with respect to the basic situation in that country without full consultation with both Arabs and Jews. Your Majesty will also doubtless recall that during our recent conversation I assured you that I would take no action, in my capacity as Chief of the Executive Branch of this Government, which might prove hostile to the Arab people." The publication of these documents naturally brought a storm of protest from Zionist quarters (see PALESTINE).

On March 1 Saudi Arabia was at war with Germany and Japan, except for the Holy Places, which were technically to continue neutral. Shortly thereafter Saudi Arabia became the 45th of the United Nations.

The refinery of the American-Arabian Oil Co. at Ras Tanurah on the mainland north of Bahrein was reported nearly completed as the year opened. It was to have a capacity of 50,000 barrels a day. In addition the refinery on Bahrein was being enlarged and a pipeline was being laid to it from the mainland. Italian laborers from Eritrea were among those used in these building operations. Early in the year this oil company also completed surveying possible routes for a pipeline from the oil fields along the Persian Gulf to seven points on the Mediterranean: Tripoli, Sidon, Haifa, Gaza, El Arish, Port Said, and Alexandria. None of these routes was less than 1,000 miles in length and each was estimated to cost from \$55,000,000 to \$75,000,000—part or all of which might be covered by a United States Government loan.

By 1945 no less than \$100,000,000 in American capital had already been invested in Arabian oil, and it was confidently predicted that this sum would rise to \$1,000,000,000 within a decade or less. There were around 2,000 American technicians and businessmen in the country, plus 500 more in Bahrein. The American-Arabian Oil Co. also gave employment to over 10,000 Arab workmen. Oil was not the only American interest in Arabia. Among the other enterprises which might be mentioned were banking and shipping concerns, the Saudi Arabian Mining Syndicate working for gold in the northern Hejaz, agricultural missions seeking to improve irrigation systems and a military mission training Saudi Arabian troops. A great airport was also being built at Dhahran, near the oil fields. Though constructed with American money and under American direction, it was eventually to be turned over to the Saudi Arabian Government. All of these rapidly expanding American interests inevitably created diplomatic problems, which were the subject of conversations in Washington on July 31 and August 1 between the Amir Feisal, Minister of Foreign Relations for Saudi Arabia, and the State Department.

At the close of the year King Ibn Saud was preparing to go to Egypt in order to return Farouk's visit of the preceding January.

The Yemen was not drawn so closely into world affairs as Saudi Arabia, though in February it was authoritatively reported that the Imam's government had notified the Egyptian Foreign Ministry of its adherence to the protocol of the Arab League. The Yemen joined the Arab League in March and its representative took part in the periodic meetings of that body.

ROBERT GALE WOOLBERT.

ARCHAEOLOGY. The outlook for archaeological exploration this year has been little better than in the previous years of the war. There have, however, been some systematic digging and some

chance discoveries that should be recorded. At Assuan in Upper Egypt excavations have brought to light a fine Hellenistic temple built, so the inscriptions tell us, by one of the cavalry regiments of Ptolemy III. Nearby was recovered a marble statue of Venus. Some twenty miles south of modern Heliopolis Dr. Etienne Dreeton, director of the Egyptian Service of Antiquities, has discovered evidence in a tomb that ancient Heliopolis was situated at this place instead of at the site of the modern town. Here were found a great number of tombs which showed the place to be the ancient necropolis. Some of the inscriptions carry back to 5000 B.C. (the 1st Dyn.).

At Khirbet-Kerach, ancient Beth Yerach, on the southwest shore of the Sea of Galilee the Jewish Exploration Society has found far below the surface of the ground remains of buildings dating back 2,000–2,500 years. One of the finds was two groups of buildings, located on either side of a road ten meters wide, belonging to a suburb which was begun in the Ptolemaic period. One of the houses showed a paved courtyard, living-rooms, bath, kitchen, and storerooms. On the site was recovered a considerable amount of pottery, including some Rhodian jars the handles of which bore inscriptions which date them 220–180 B.C. Remains of what may have been temporary Roman barracks were also uncovered. The site of the town had been occupied from the fourth millennium to the 24th century B.C. The town had been destroyed and rebuilt several times. The height of its prosperity was reached in the middle of the 3d century before Christ.

At Alaca Hüyük, about thirty-five kilometers north of Bogaz Koy, excavations have been again conducted on this well-known site which have brought to light information which illuminates the culture of Anatolia before the coming of the Hittites (2100–1200 B.C.). In the graves, which lay between the levels V–VII, many vessels of gold were found. Not the least interesting was a silver idol the breasts and shoes of which were of gold. Besides this there came to light gold and silver bracelets and a silver spoon with a golden handle. Iron was apparently a treasured metal. The evidence recovered from this excavation reveals that a high culture existed here in Anatolia between 3000 and 2000 B.C.

Recent excavations at Tell Hassuna in northern Iraq show that settled communities existed here back to the Neolithic Age. Seven levels were uncovered, each of which afforded a village plan with the complete organization of a farming community. The site appears to have been occupied as far back as the fifth millennium B.C. Among the objects recovered were an almost-intact primitive sickle and a hoe of stone still showing traces of the bitumen with which the handle was attached. The earliest painted pottery, which is the oldest discovered in Iraq, is of the rectilinear geometric style.

OLIVER S. TONKS.

ARCHITECTURE. A marked discrepancy appeared in 1945 between the large bulk of work in architects' offices and the small amount of building in the field. From a state of relative inactivity architects' offices sprang into feverish action accelerated by the war's end. Meanwhile actual building declined to so low a point that the construction industry accounted for only 2 percent of the country's economic activity instead of the customary 11 percent. Skyrocketing costs made much of the paper work futile and, as the year ended, architects were

trimming away every possible excess item from their plans to save as many as possible of them for actual building.

In the war theaters the ruin became ever more appalling, with the destruction shifting naturally to Germany and Japan. The incomparable city centers of Nuremberg and Dresden were reduced even more completely than Warsaw had been, and a similar fate overtook innumerable other towns. In the case of Frankfurt, the historical heart of the city was gutted, but the works of I. G. Farbenindustrie were spared and along with them the modern housing. As the year ended scientists were declaring that it would now be possible to destroy every product of human culture in an area equal to the states of Illinois and Indiana combined, with a single atomic bomb.

City Planning. A wave of antagonism against any form of super-imposed control nullified the value of most theoretical planning projects completed in 1944 and widely publicized, such as the plan for Greater Boston. A competition similar to the Boston competition was initiated by the *Herald Examiner* in Chicago for judgment in July, but the announcement of awards was not made until December and there was no publicity.

A "super-colossal" model of Toledo by the industrial designer Norman Bel Geddes was completed at a reported cost of \$250,000 under sponsorship of the *Toledo Blade*. It was confined to transportation only, making grandiose plans for the twenty-four railroads entering Toledo and for the port, which is the third largest on the Great Lakes. Nevertheless, when the time came for action, the New York Central System announced a new station in the old location, to be designed by its own work forces.

Public. A significant project, which included elements not only of town planning but of the newer sort of functional public architecture, was the town of Oak Ridge, Tenn., housing a population of 75,000 workers on the atom bomb. It was erected in great haste and was necessarily chaotic but the town plan as a whole (Skidmore, Owings & Merrill, architects) was finely conceived, and there were some splendid individual passages among the self-contained community provisions that included schools, a shopping center, library, churches, hospital, and recreational center for the self-contained city.

Industrial. Latest dams and structures of the Tennessee Valley Authority (TVA), rushed through for war production, were released for publication during 1945. Designed and constructed by the engineering and architectural staff of the Authority, they displayed the same grand simplicity that had made the earlier TVA structures some of the most satisfying architecture of the modern world. Noteworthy among the new dams was the Cherokee Dam, five miles above Knoxville.

No details could yet be released about the huge atomic bomb plants at Oak Ridge and elsewhere.

Commercial. It was true of commercial buildings as of most others that those which were reported in the architectural press during 1945 had generally been built before war interdictions. This was true of the Sill Building at Bakersfield, California, a quite remarkable integration of architectural forms with pleasant working arrangements. Exterior office walls were entirely glass, well shaded by continuous, wide, cantilevered balconies toward the street, serving also, in the mild climate, as the only corridors. These balconies created powerful horizontal recesses alternating with a warm surface of

Pompeian red brick. Franklin & Kump and Associates were the architects.

There was great activity in store design, continuing trends familiar in recent years. In department stores, in particular, counters were made to follow "flow lines" as free as those of traffic highways, serving also to produce visual "pockets" more easily explored by the eye than the endless perspectives of rectangular rows of counters of previous custom. In many small stores the availability of bent lighting tubes and other new devices tempted the architects into a baroque treatment which effortlessly matched a low public taste.

Increasingly, industrial establishments used plants as showrooms, e.g. Sunrise Dairies, Hillside, New Jersey, Serge P. Petroff & Harvey P. Clarkson Associated Architects, and the very neat visitors' building of the John Morrell & Co. packing plant at Sioux Falls, South Dakota, Harold Spitznagel, Architect.

Social. The war has brought a fresh new genre in the form of grouped community facilities. The community building for the Holley Park Housing Project in Seattle, Jones, Ahlson & Thiry, associated architects, made very pleasant provision for recreation and nursery care in a grouping which was nicely and inconspicuously related. Among schools and hospitals some quite beautiful examples have been added, notably the Carmel High School, Carmel-by-the-Sea, again by Franklin & Kump and Associates. Here all the functional efficiency developed within recent years was incorporated in large, easy, and varied forms, many of them having the basic appeal of a large weathered barn, with rich textures, clean construction, and very sophisticated detailing. Perkins, Wheeler & Will added a wing to their very handsome Rugen School at Glenview, Illinois. A quite inventive and a very pleasant elementary school was the one at Paso Robles, California, by Frank Wynkoop & Associates, Architects and Engineers. Here extraordinarily pleasant interiors were created by the use of clerestory windows set well back over spacious floor areas of square classroom. At Berea, Ohio, J. Byers Hays, Wilbur Watson and Associates, Architects, managed a beautiful plan for a combined community, health and child center, achieving good separation among these facilities and a surprising intimacy of scale in relation with the housing development of which it was a part. Another good school was the Jackson School, Wayne, Michigan, by O'Dell, Hewlett & Luckenbach.

Among hospitals, the Midland Hospital (Michigan) by Alden Dow was a very unusual example, set in a richly wooded area and avoiding the hospital appearance altogether, giving the impression outside of being an unusually pleasant country club or inn. The planning was more centralized than the appearance indicated. At Petoskey, Michigan, Skidmore, Owings & Merrill, adding a new wing to their handsomely symmetrical Little Traverse Hospital, managed to improve the appearance rather than detract from it by an unusual splayed disposition of the new wing to fit falling land contours. A new lightness was introduced by the full-length window rows of the sunny bedrooms and corridors.

The most ambitious hospital project to be begun was the Tripler General Hospital on the Island of Oahu, Hawaii, by the U. S. Army Corps of Engineers and York & Sawyer, Architect-Engineers, with Paul Cret Consulting Architect. Designed to serve as permanent hospital for the Army base, it creates an entire village occupying 360 acres on a sharply rising site.

Among churches, the most remarkable was a tour-de-force by Bruce Goff for the "Seabees" at Camp Park, California. The unpromising material for the nave was a pair of giant-sized, arched, corrugated, metal-covered "Quonset" huts. When combined with wide transversely projecting pylons of salmon red brick, treated inside with insulating material, given dramatic though simply contrived lighting, and embellished with plant material and a pool, these made up into a building of quaint picturesque charm and considerable dignity.

Airports. In no field were the concepts of just yesterday so obsolete as in airports, and there was feverish design activity to correlate the innumerable new requirements set up by the performance of new planes and by new concepts of public convenience (v. *Architectural Record*, April 1945, "Airports, Building Type Study No. 100, in Collaboration with *Aero Digest*.")

Newly finished work was very scarce, however, except for the terminals of the Air Transport Command, set up all around the world under direction of Charles M. Goodman, architect. The most complete was at Washington, D. C. This was very unusually fresh and free in planning, in composition, in planting, and in the very direct use of well-proportioned wood-and-glass units, largely prefabricated.

Recreation. Near Denver, Colorado, under the direction of Burnham Hoyt, Architect, there took shape the Red Rocks Amphitheater which may well take its place among the great architectural concepts of history. As in many of these supreme enterprises, the major part of genius lay in discerning how many things not to do. The original rock formation in the Rocky Mountain foothills was a sloping ledge bounded left and right by huge sandstone monolithic cliffs. With a minimum of excavation the sloping site was leveled for seats and excavated material was used to build a platform and storage house at the bottom. The natural formation itself is said to provide perfect acoustics, a whisper being audible from one end to the other, and the majesty of the setting is that of Nature, the hand of man doing only what was irreducibly essential to complete her work.

Residential. An unmistakable trend was in the direction of public acceptance for contemporary forms in architecture. A sampling of opinion among its readers by *McCall's*, a leading women's periodical, resulted in exactly one-third voting a preference for contemporary examples, despite the fact that financial restrictions have confined the number of contemporary houses actually built so far to a vastly smaller proportion of total operations.

The latest trends were expressed largely through models and competition drawings but some good houses were given publication. Among them was a pleasant H-shaped house, by W. W. Wurster of Wurster & Bernardi, creating a separate living and dormitory zone by means of a glazed gallery; a hillside house in San Francisco by Gardner Dailey, most agreeably linked with the garden by means of a "colossal-scale" two-story conservatory window reaching slightly above the main roofline; a town house in New York by William Lescage, making use of artificial light and ventilation to convert the dead interior of the long slab-shaped plan into useful bathrooms and utility space—the living room being allowed to occupy the entire length of the second floor, as usual in the new town-house type largely developed by this architect. There was the very personal, somewhat stiff but elegant house of the artist Millard Sheets in Claremont, done in association with Benjamin H. Anderson; a

house in northern California by John B. Yeon, in that half-ranch, half-forest lodge manner which makes for local charm in the area. A "solar" house, far more "modern" than any yet prefabricated, was prepared for the mass market by George Fred Keck and Edward W. Green, intended to fall within the \$6,000 to \$7,000 price range rather than the more customary \$2,000 to \$3,000 range. Finally, there were unpretentious houses carrying forward the vernacular building habits of America, one by Walter K. Behrendt for his own use at Norwich, Vermont (John Spaeth, Jr., associated), and the other a very individual little home of fieldstone and salvaged materials at Miami, Florida, by Alfred B. Parker, achieving distinction at a cost of no more than \$200.

New Materials. The war could not fail to leave new building materials and methods behind it. Among lumber products there were many synthetic forms of wood: the "impregs" made by impregnation with synthetic resins, with a controlled range of density and strength; the urea woods, made pliable for working, setting firmly later; hardwood made from soft woods by water-insoluble resins forced into the cells; fireproof wood, plywood tubing, wood bonded to metal or paper finishes. The chief use for much touted plastics turned out to be auxiliary functions such as bonding. For example, a hemp-fiber felt immersed in plastic compound could be molded with great ease to shapes such as furniture, boats, house-trim. Plastics were devised for insulation that would foam to fill hollow areas and set to retain their shape; cellular glass produced by the expansion of gas was becoming another favored insulating material. Plastic insulation replaced precious rubber on electric wiring.

A new hybrid doing the work of masonry was aluminum corrugated sheeting to serve as the outer wall face, with a backing of vermiculite concrete for fireproofing. In masonry, however, the chief progress came through adoption of the 4-inch "modular system" whereby doors, windows and other openings could be made in standard dimensions to fit openings without need for cutting brick or tile. In metals there was anticipated much enlarged use of aluminum, magnesium, stainless steel—but not a revolution. The wonders promised in house equipment, such as airplane heaters, did not materialize, but there was improved use of such new types as radiant heating not only in floors but—by use of copper—in ceilings. The full development of "reverse cycle" heating still seemed dependent on cheap electrical energy. There were new combination kitchen and utility plumbing assemblies on the market by the end of the year, new sealed and thermally insulated double or triple-glass window panes, new fluorescent and "cold cathode" lights, and plenty to go on for a "boom," provided sensible answers could be found to the problems of conversion and the market.

DOUGLAS HASKELL.

ARGENTINA. A republic of South America. Area: 1,079,965 square miles. Population: 13,906,694 (1943). Capital: Buenos Aires.

Argentina is the second largest of the Latin American republics. Two-thirds of its surface consists of plains; the remainder, of the Andean highlands extending north and south along its western frontier. A temperate climate prevails in most of the country, although low-altitude areas of the northwest are sub-tropical and southern Patagonia is cold, with snow falling the year around in Tierra del Fuego.

Government. Under the Constitution of 1853, a federal union of 14 provinces and 9 territories was established. The Constitution provides for a bicameral legislature composed of a Senate of 30 members, elected by provincial legislatures for 9-year terms (one-third to be elected every 3 years), and a Chamber of Deputies of 158 members directly elected for 4-year terms (one-half to be elected every 2 years). The President is chosen by electors for a 6-year term, and cannot immediately succeed himself. He is to be assisted by a Cabinet of 8 members. Provincial governors are elected by local suffrage.

President Ramón S. Castillo was overthrown by a military coup on June 4, 1943. General Pedro P. Ramírez assumed the presidency on June 6, 1943, and he was succeeded by Brig. Gen. Edelmiro J. Farrell on Mar. 10, 1944. The Congress was dissolved shortly after the 1943 revolution, and political parties were abolished.

Events, 1945. As the year opened, the Argentine Foreign Ministry was awaiting the reply to its request that a conference of American foreign ministers be called to consider the position of the Buenos Aires Government in the American family of nations. It came on Jan. 8, when the Governing Board of the Pan American Union voted unanimously, the Argentine delegate abstaining, to defer the request indefinitely. This decision was taken, the Board asserted, "in view of the fact that the American nations cooperating in the war effort have agreed through diplomatic channels to hold a conference in the near future to study war and postwar problems."

Argentina reacted promptly to this rebuff. On Jan. 11 the Foreign Ministry instructed the Argentine representative to the Pan American Union to inform that body that "as long as Argentina's rights are not recognized and the procedures of consultation are altered, as . . . is implied in the resolution taken by the Governing Board . . . the Argentine Government has decided to refrain from participating in the meetings of the Pan American Union."

There were also repercussions in Buenos Aires, where Foreign Minister Orlando Peluffo and two of his principal aides resigned on Jan. 15. Peluffo's statement that he had stepped out, "not for reasons connected with my official functions, but because of my points of view regarding the Government's recent orientation of domestic matters," suggested that other than international factors may have been involved. On Jan. 17 Finance Minister César Ameghino was named Acting Foreign Minister; and Amaro Avalos, a retired lieutenant colonel, was appointed Minister of Agriculture to succeed Gen. Juan D. Pistarini, who had held the post temporarily.

The "orientation" to which Peluffo referred may have been an apparent tendency to court democratic sentiment within Argentina, which accompanied the overtures to the other American republics. The Government announced on Feb. 9 that the country had entered upon a "period of pre-electoral preparation," and on the same day it received a preliminary report of the commission which had been appointed to set up a new political party statute. And on March 10 Vice President Juan D. Perón announced that he would not be the presidential candidate of any political party, as the "military statute forbids me to do so;" but he left himself a loophole by adding that no person, whether soldier or civilian, could be deprived of his constitutional right to occupy the presidency.

These assurances had little effect on opposition

opinion. On Feb. 27 a manifesto appeared, signed by hundreds of citizens in all walks of life and affiliated with various political parties, requesting the restoration of full constitutional freedom. On March 2, 1,500 members of the Unión Cívica Radical, the country's most powerful political party, issued a statement condemning the Farrell-Perón regime as a "political system alien to the national spirit." And on March 19, 400 Socialists in Buenos Aires province made the first open attempt since the June 1943 revolution to unite liberal forces by calling for the creation of a "great national movement" in favor of constitutional government.

To counteract this growth in opposition sentiment the Government now had ready to its hand a decree of Jan. 15, for the "suppression of crimes against the security of the state." Its general effect was to penalize severely every conceivable form of treason, espionage and sabotage, and to strengthen the Government's control over labor and industry. It was regarded as a new weapon for the Government against its internal enemies on both the right and left, and against any hostile foreign influence.

On Feb. 21, 19 American republics convened in Mexico City for an Inter-American Conference on Problems of War and Peace, in accordance with the announcement made by the Pan American Union on Jan. 8. Neither Argentina nor El Salvador was invited, but El Salvador was admitted during the course of the conference.

One of the final acts of the conference before it adjourned on Mar. 8 was to hold out an olive branch to Argentina. Resolution LIX declared "That the unity of the peoples of America is indivisible and that the Argentine Nation is and always has been an integral part of the Union of the American Republics." Argentina was then invited to identify itself with the common policy by signing the Final Act of the Conference. Finally, there was a warning that lip service would not be enough: "The conference hopes that the Argentine Nation will cooperate with the other American Nations."

It had been evident, before the Conference invitation was offered, that Argentina would accept it. On Feb. 17, the Foreign Ministry released a note addressed to the German Foreign Office, energetically protesting against a German "threat" to deny safe conduct to seven Argentine diplomats awaiting exchange in Goteborg, Sweden, and warning that if this attitude were maintained, Argentina would consider it an "act of hostility." This was backed up by a press campaign apparently intended to arouse the reportedly apathetic population in favor of a declaration of war against the Axis. (On February 28 the Berlin radio stated that the Argentine diplomats would be repatriated.) On Feb. 20 the Foreign Office announced that German funds in Argentina would be embargoed to defray the cost of two Argentine ships sunk and one damaged by submarine action, and to cover expenses of internment of the crew of the Admiral Graf Spee. British Foreign Minister Anthony Eden told the House of Commons on March 7 that the Argentine Embassy had assured him that no persons accused of war crimes would be permitted in Argentina, nor could they acquire property or deposit capital there. Argentina resumed its seat in the Pan American Union Governing Board on Mar. 12, when Rodolfo Arias, charge d'affaires in Washington, attended a special meeting in honor of the Acting Foreign Minister of Brazil, Pedro Leão Velloso.

The final indication that the Farrell Government

had decided on its course came on Mar. 23 when the nationalistic Minister of Justice and Public Instruction, Rómulo Etcheverry Boneo, resigned, stating: "In view of the course that it is now desired that our foreign policy should follow in its objectives and procedures, I find it impossible to continue to collaborate with the President." (The Minister of Agriculture, Col. Amaro Avalos, was designated Acting Justice Minister on Mar. 26; he was the seventh man to have held the post within 22 months.)

After a long Cabinet meeting on Mar. 27, the Government issued a communiqué stating that it accepted the invitation of the Mexico Conference and "adheres to the Final Act of the said conference. To the end of identifying the policy of the nation with that of the other American republics . . . there is declared a state of war between . . . Argentina . . . and Japan. There is also declared a state of war between . . . Argentina and Germany, in view of the character of the latter as an ally of Japan." A week later the 20 other American republics recognized the Argentine Government, ending a diplomatic quarantine of more than a year.

Buenos Aires followed up its declaration of war with an anti-Axis campaign that seemed sincere: all resident nationals of Germany and Japan were ordered to register as "aliens under surveillance," and their funds and property were placed under government control; 700 persons were arrested in a large-scale hunt for spies, saboteurs and enemy sympathizers; and confiscation of Axis companies was decreed.

Recognition of the Argentine Government meant the appointment of a new United States Ambassador. The man chosen was hard-hitting businessman-diplomat Spruille Braden. He made it clear, as soon as he reached Buenos Aires, that his Government had not changed its opinion of the Farrell regime in spite of its about-face in foreign policy, and his public utterances reflected a growing belief that the Colonels' regime was not following through on its fulfillment of the Mexico City resolutions. Secretary of State Stettinius backed the Ambassador on May 28 with a blunt statement that the United States was not in sympathy with a good part of Argentine policy.

(On Aug. 25 Braden was appointed Assistant Secretary of State in charge of Latin American Affairs, succeeding Nelson A. Rockefeller.)

Foreign Minister Ameghino replied to the Secretary with new pledges, and some democratic gestures were made. But news which came through and around a tightened Argentine censorship told another story. Wholesale arrests of business leaders, newspapermen and other opponents of the Farrell-Perón regime were reported. People were being seized on street cars when they were overheard criticizing the Government. Arnaldo Cortesi of the New York Times cabled his paper that "things have happened in Buenos Aires recently that exceed anything this correspondent can remember in his 17 years' experience in Fascist Italy."

The United States increased its indirect pressure on Argentina on June 25 when Assistant Secretary of State William L. Clayton reported that four known "spearheads of Axis economic penetration" in Argentina were in "process of elimination," but that 104 others had not been touched.

Meanwhile, formidable new opposition to Perón came into the open at home. The principal Argentine business and industrial organizations, long hostile to the Government, virtually declared war

on it on June 16 with a full-page newspaper advertisement protesting the "dangerous consequences" of the official economic and social policies. Perón deprecated this attack. He was glad to see, he said, that the country's "real industrialists" were not among the signers—an obvious reference to the cattle interests which are the backbone of the Argentine economy. Three days later the "real industrialists," represented by the powerful Argentine Rural Society and the Rosario Rural Society, expressed their "absolute solidarity" with business and industry, and on June 22 the Industrial Union, the only important business group that had not signed the original statement, gave its endorsement. And the Buenos Aires Association of Lawyers condemned the Government's treatment of political prisoners.

On June 28 the universities staged the first successful anti-government protest demonstration. Fifty thousand students, representing every Argentine university and every student organization from left to right, walked out of their classes for one day. Most professors joined the demonstration.

In July the political parties, suppressed since December 1943, entered the attack. More than a thousand Radical leaders used a party banquet as a forum for harsh attacks on the Government and renewed pledges of non-cooperation with it. And the small but influential Socialist Party adopted a resolution that the Government "had failed politically, mentally and morally."

At a military "comradeship dinner" preceding the celebration of Argentine independence day (July 9) President Farrell defied his opponents. Then he executed a tactical withdrawal by announcing that the long-promised elections would be called before the end of the year, that they would be "completely free," and that "we are not manufacturing our own successors"—an apparent reference to Perón's presidential ambitions.

All this time U. S. Ambassador Braden had been carrying on his outspoken campaign against the rulers of Argentina and in support of the country's democratic elements. Late in July he was the victim of a brief but intensive counterattack. Hundreds of anti-Braden posters appeared on the walls of Buenos Aires and Calle Florida was white with leaflets. These depicted the envoy as a tough cowboy who was trying to run Argentina and they tried to connect him with a recent disastrous fire in a Chilean copper mine founded by Braden's father but owned by other interests for many years. The climax of the smear campaign was a mass meeting in the Casino Theater in memory of the miners who died in the Chilean disaster. The Government disavowed the campaign but the police made no effort to interfere with it and it was far too well organized to be the work of individual fanatics. During its later stages Braden was out of the city. When he returned a crowd of 2,500 democrats, including political and economic leaders of the country, gave him a triumphant reception at the railroad station.

Farrell's announcement of forthcoming elections intensified political activity. Undeterred by Farrell's declaration of July 8, Perón was busily seeking political support. The large and somewhat unwieldy Radical Party offered a good hunting ground. Some elements of it seemed receptive but the party organization turned him down sharply and decided to expel any of its leaders who accepted government posts or collaborated with the Government in any way.

On Aug. 1 the Government announced new rules under which political parties would be allowed to

resume activity. Federal electoral courts would be named. Within ten days after they were set up, they would appoint provisional committees of party members to reorganize each of the major parties: National Democrat, Radical and Socialist. The Government added that "there is no reason why the Communist party cannot take part in political activities." In the meantime, parties would be allowed to hold indoor meetings without police permits and lifting of the four-year state of siege was promised "at the opportune moment." (This was done on Aug. 6.) Political leaders were highly critical of the reorganization plan, which they feared would enable Perón to "reorganize" parties for his own ends. Announcement of these changes was one of the last acts of Navy Minister Rear Admiral Teissaire in his second capacity as Acting Minister of the Interior. On Aug. 29, J. Hortensio Quijano, a Radical, was named permanently to the post; he was immediately expelled from the party.

Small-scale street clashes had been no novelty in Buenos Aires during the first part of the year. But the surrender of Japan and the end of World War II brought on the bloodiest riots since the June 1943 revolution. Student victory celebrations turned into anti-government demonstrations, and these resulted in street battles between the students and nationalist groups. The unofficial three-day (August 14-16) toll was four dead, some 200 injured, and considerable property damage.

A minor Cabinet crisis developed on Aug. 22. Finance Minister Ceferino Alonso Irigoyen resigned, charging that the Army had interfered with his efforts to reestablish constitutional normality, and Foreign Minister César Ameghino also gave up his post. Perón took advantage of the opportunity to add two more renegade Radicals to his Cabinet: Armando G. Antille in the Interior Ministry, and Juan Issac Cooke in the Foreign Ministry.

An Argentine White Paper issued on Sept. 11 purported to show how the Farrell Government had fulfilled the pledges embodied in the Final Act of the Mexico City conference. Washington was unimpressed. And on Sept. 19, Argentine democrats held a great March for Freedom and the Constitution which was a complete repudiation of the Government. A crowd conservatively estimated at 250,000 paraded through the streets and plazas, swore solemn allegiance to the constitution and dispersed quietly and in order: "Buenos Aires lived one of its great days yesterday," *La Prensa* said on the following morning.

But the Government struck back hard. The state of siege was reimposed on Sept. 26. Democratic newspapers were raided and there was a wave of wholesale arrests of prominent opposition businessmen, educators, politicians and newspapermen. The roundup ended as suddenly as it had begun and within a few days most of the prominent prisoners had been released. The Government was apparently satisfied with its show of defiance.

Argentine students went into action again on Sept. 28, when a strike was called in all six Argentine universities and students barricaded themselves in university buildings. Police measures against the strikers were ineffective until Oct. 4, when the officers went seriously to work. Several students were badly injured when police took La Plata by assault, and one by one the other universities capitulated or were overrun. There were serious riots at the end of the strike as relatives and aroused citizens protested the rough treatment of the students, many of whom were girls.

Through all this storm of opposition, Perón seemed unmoved: "Everybody is demanding my

head but thus far no one has come to get it," he boasted. Students, businessmen, politicians, workers did not matter as long as the Army stood behind him.

But on the night of Oct. 8 the Army suddenly turned against the Colonel. The younger officers at Campo de Mayo, the great Army base in suburban Buenos Aires, saw the reputation and prestige of the service being damaged by Perón's political activities. They wanted to remove the Army from politics altogether and return the Government to the people. General Eduardo Avalos, commander of Campo de Mayo, was as ardent a nationalist and militarist as Perón, but he was also an opportunist and a personal rival of the Colonel's. He quickly assumed leadership of the young officers' movement. The Government could not stand against the Army, and on Oct. 9 it was announced that Perón had resigned as Vice President, War Minister and Labor Secretary; he was confined on the penal island of Martín García.

The rebellion spread as older officers joined it, and it took a liberal trend. Newspaper suspensions were lifted, political prisoners released, and elections called for April 7, 1946. On Oct. 12, the entire Cabinet resigned with the exception of Avalos, who had been made War Minister, and Rear Admiral Hector Vernengo Lima, newly appointed Navy Minister. The following day Avalos and Vernengo Lima took over all but two Cabinet posts and, with Farrell, formed in effect a ruling triumvirate.

Perón was out but it quickly became apparent that there was no one to take his place. The officers differed as to whether to oust Farrell and hand the Government over to the Supreme Court, or to leave the Government in power until elections could be held; suspicious civilians hesitated to cooperate with the military.

The result was virtual paralysis of government, which lasted for several days and gave Perón his chance to come back. On Oct. 16 he claimed to be ill and had himself transferred from Martín García island to the Central Military Hospital in Buenos Aires. Here he was able to get in touch with the labor elements, comparatively small in number but tough, armed and well-organized, whom he had won over to his side long before.

There were scattered disturbances in the industrial suburbs on that day. They increased in intensity and on the following day spread into Buenos Aires itself, where strikes and organized terrorism shut down all transportation and business. The strong police force, which Perón had built up as a counterweight to the Army, made no attempt to interfere. Finally, Perón left the hospital and 50,000 persons crowded into the Plaza de Mayo as word went out that he would address them.

Shortly before midnight Perón appeared with Farrell. The President embraced him publicly as the crowd roared its approval. The Avalos-Vernengo Lima Cabinet had resigned, he announced; an ardent Perón supporter had been named Labor Secretary, and the Government would not be turned over to the Supreme Court. Perón called on all workers to take part in a 24-hour general strike to celebrate the "day of glory" and for a day his "labor" supporters, described as mostly irresponsible rowdies, ruled Buenos Aires. Observers called the whole performance an example of organized disorder reminiscent of early Nazi tactics. When it was over Perón was in power again, although he took no post in the Government and retired from the Army.

Attention turned then to the forthcoming election, the date of which was advanced from April 7 to Feb. 24. Supporters of Perón (Peronistas) opened headquarters on Nov. 9 and the opposition also went into action. The country's largest party, the Unión Cívica Radical, traditionally avoids coalitions and a stubborn group had been fighting a proposed electoral union of parties opposed to Perón. But on Nov. 14 the Radicals finally agreed to make common cause with the Socialists, Communists and Progressive Democrats, on condition (acceptable to the other parties) that both Presidential and Vice Presidential candidates be Radicals. The new coalition (Democratic Union) included every major party in Argentina with the exception of the conservative National Democrats; but all leading National Democrats had repudiated Perón. The lines were now clearly drawn and the country settled down to a bitter last-ditch struggle. Anti-Semitic outbursts became frequent, the religious issue was dragged in, and street demonstrations by both sides kept Buenos Aires stirred up. Both the Peronistas and the opposition staged large-scale demonstrations late in December.

The Government on Dec. 20 put into effect a decree granting widespread wage increases to practically all Argentine workers. It ordered increases ranging from a minimum of 10 percent to a maximum of 25 percent for those in the lower income groups, and payment of an annual bonus of one month's wages. This was believed to be a substitute for a profit-sharing plan devised by Perón, which the Cabinet had rejected; and Labor Secretary Col. Domingo A. Mercante credited Perón with "labor's new gains." The organized business community declared that it would be "absolutely impossible" to comply with the decree.

The campaign speeded up still more as the year ended. Perón completed an energetic week-long campaign swing through the northern provinces. And on Dec. 31 the Radicals nominated José P. Tamborini, former legislator and Cabinet Minister, for President, and Enrique M. Mosca, one-time Governor of Santa Fé, for Vice President. They would be supported by all the parties of the Democratic Union.

Foreign Relations. Argentine foreign policy during 1945 was concentrated chiefly on its relations with the other American republics as a group (see *Events* above). Its place in the international system was defined at the United Nations Conference on International Organization at San Francisco, when as a result of its declaration of war on the Axis, and over the strenuous objections of the Soviet Union, it was admitted to membership in the United Nations.

Argentine relations with the United Kingdom were much more cordial than with the United States during the year. At the annual Fourth of July luncheon of the United States colony, the British Ambassador, Sir David V. Kelly shared the platform with United States Ambassador Spruille Braden, and seemed to answer reports that Britain and the United States were at odds on Argentine policy by echoing Braden's indirect attacks on the Farrell-Perón regime: "Just by imprisoning a few thousand Gestapo toughs," he said, "you do not kill the ideas which put them in power. Like a hydra with its hundred heads, ideas continually rise again, wherever there is suitable ground for them to grow in and whenever those whom they menace become slack or disunited." But two months later, when Braden had become Assistant Secretary of State in charge of Latin American affairs, and U. S. policy had stiffened, a British

Foreign Office spokesman told the press that Britain and the United States would abandon their co-ordinated foreign policy toward Argentina and would conduct their future relations with that country on an individual basis. Britain had not been advised in advance that the United States was adopting a new policy, the spokesman asserted. There were reports from Ottawa that Canada might follow London's lead.

The Foreign Office admitted that Britain's dependence on Argentine foodstuffs made a "stern" attitude impossible, and British businessmen, supported by their Government, exerted every effort to strengthen trade ties with Argentina. During the spring a group of British businessmen and technicians, whose expenses were paid by the London Government and who were called "Britain's post-war spearhead in South America" by local traders, arrived in Buenos Aires. By the end of the year it was reported that the British were definitely getting off to a big lead in the fight for the huge Argentine market. In December, Leslie Hore Belisha, former British War Minister, toured Latin America on behalf of unidentified but non-governmental British interests. Some commentators remarked, however, that at this time British activity in Argentina consisted more of promise than performance.

It was apparent that Sweden, also, was making a major drive for South American, including Argentine, trade. A mission representing Swedish heavy industry had visited Argentina in 1944, and its accomplishments were reflected in official figures for Swedish-Argentine trade in the first quarter of 1945. Argentine purchases from Sweden amounted to more than \$4,500,000 as against less than \$2,000,000 during the same period of 1944; but Argentine exports to Sweden declined from \$4,853,000 in the first three months of 1944 to \$1,396,000 in 1945.

Early in August Sweden signed an agreement with Argentina providing for exchange of Swedish manufactured goods for Argentine agricultural products, except beef, mutton and certain other meats, "in the largest measure possible," and "for an indefinite time." Among the urgently needed articles which Argentina would receive were steel bars, pipes, ball bearings, surgical instruments, oil-well drilling machinery, electrical equipment, telephones and accessories, machinery, motors and engines, and electric-light bulbs.

A financial agreement signed during the fall by Argentina and France marked the restoration of direct trading between the two countries after the wartime lapse. A feature of the agreement was a credit of 150,000,000 pesos to cover Argentine exports to France. While the products to be traded were not specified, it was understood that France would get mainly wool, grains, meat and quebracho extract while Argentina would receive perfumes, wines, champagnes and essential oils.

While Argentina's relations with her immediate neighbors remained officially correct, they were clouded by reiterated charges that the Buenos Aires Government had imperialistic ambitions. Democratic Argentine exiles in Montevideo declared that such opposition nationalist parties as the outlawed Integralistas in Brazil and the Blanco Nacionalistas in Uruguay were working with Argentine nationalists to rebuild the old Viceroyalty of the River Plate, which had included most of the southern part of the continent. Both Chile and Uruguay showed signs of nervousness. In an interview with the Santiago weekly *Ercilla*, Alfredo Rosende, chairman of the executive committee of the important Chilean Radical party, stated that

the Argentine dictatorship threatened the peace of America and that Chile must face that menace "which one day may force us to change the Christ of the Andes for machine-gun nests and barbed wire entanglements."

Tension between staunchly democratic little Uruguay and its powerful neighbor was increased by the proposal of Uruguayan Foreign Minister Rodríguez Larreta that the American republics agree to joint intervention in any American country which denies democratic rights to its people. *La Época*, Perón's journalistic mouthpiece, bitterly attacked Uruguay and made veiled hints that the Montevideo Government had better watch its step. Argentine hostility was also manifested in such petty ways as by enforcing literally all the wartime restrictions on travel and business between the two countries.

Economic Conditions. Continued Argentine prosperity was viewed as inflationary, and as leaving unsolved such serious economic problems as an acute shortage of fuel, deterioration of the transport system, diminishing supplies of essential raw materials, and the constantly increasing cost of living.

By December the worst part of the fuel crisis seemed to be over. Gasoline rationing was scheduled to end on Jan. 1, 1946, and sufficient reserves of fuel oil were being built up so that it would probably no longer be necessary to burn grain.

The transportation system, however, was badly disabled by lack of railroad equipment, trucks, tires and spare parts. This made it difficult to get agricultural products from the interior of the country to the ports, and cut heavily into shipments to regular customers as well as proposed shipments of Argentine food stuffs to war-devastated Europe.

Food supplies for export were further reduced by a prolonged drought in the principal farming and cattle areas. Corn, wheat and linseed crops were far below normal, and cattle fattening was affected in some places. At the end of the year private grain interests estimated that the wheat crop would be no more than 3,000,000 tons. This is approximately the domestic consumption, which would leave only the previous year's carry-over for export. The same sources estimated that this would not amount to more than 1,000,000 tons, in spite of much larger figures put forward by the Government.

Exports in general fell off during the first half of 1945, reversing the wartime trend.

The third annual report of the State Merchant Marine, issued in December, showed impressive accomplishments. The fleet had been started when the Government seized a number of Italian ships blockaded in Argentine ports. Other ships were bought or leased, and in 1944 the fleet carried 5,435,898 tons of exports and 498,298 tons of imports. It made a net profit of \$7,200,000 which was added to a reserve fund which now amounts to \$16,320,000. The fleet was reported to be in the market for up to 1,000,000 tons of shipping.

Late in December the Argentine Government decreed the creation of a state-controlled air transport fleet to serve both domestic and international routes. Its backbone would be the *Lade* (Líneas Aéreas del Estado), an army-operated state line, which private lines would be asked to join. It was emphasized that there would be no interference with international lines already operating in Argentina, such as Pan American Airways and Pan American-Grace Airways.

The People. Ninety-seven percent of the population is estimated to be of European descent, chiefly

Spanish and Italian; the remainder of Indian and mixed extraction. Argentina's population is predominantly urban with an estimated 75 percent concentrated in towns and cities of over 1,000 inhabitants. Highest regional density of population (in the eastern pampa) is about 26 persons per square mile; densities in all other regions are less than 8 per square mile. The three largest cities are: Buenos Aires, 2,600,000; Rosario, 517,000; and Córdoba, 274,000.

Spanish is the official language. The Roman Catholic Church is supported by the State, but other faiths enjoy complete freedom. In 1943 religious instruction (Roman Catholic) was made compulsory in primary and secondary schools.

Argentina is rapidly developing its educational opportunities and facilities. It is estimated that at least 85 percent of persons over 18 years of age are literate, while recent official figures give 11 percent illiteracy for the country as a whole, with only 2 percent in the Federal Capital. Primary education is now free and obligatory. There are over 14,000 elementary schools with a total of more than 2,000,000 pupils; 250 high schools with a total enrollment of about 125,000; and 6 universities having a total student body of some 39,595. Argentina has more than 100 normal schools and a wide variety of institutions giving specialized instruction in agriculture, art, commerce, industry, etc.

National Economy. Argentina's economy is based on agriculture and cattle raising. Wheat and corn are the most important crops, but linseed, other grains and cereals, sugarcane, cotton, potatoes, and grapes are also significant. Before World War II some 60 percent of the wheat, 80 percent of the corn, and 90 percent of the linseed were exported. Argentina was the world's leading exporter of corn and linseed, and one of the chief exporters of wheat. The war caused a sharp decline in exports of these crops. Production figures for the leading crops in 1943-44 were: 6,800,000 metric tons of wheat; 1,573,000 metric tons of linseed; 8,730,000 tons of corn; 5,512,000 tons of sugarcane; 119,921 metric tons of cotton; 1,404,000 tons of potatoes; and 251,900 metric tons of grapes.

Cattle raising is second in importance in the country's economy. Argentina normally produces three-fourths of the world's exports of chilled beef, and is the second largest exporter of mutton, and third of wool. Frozen and canned meat, hides, casein, and butter constitute the chief products of the livestock industry. Total livestock in the country as of June 30, 1945 included: 34,010,300 cattle; 56,181,800 sheep; 8,009,700 hogs. In 1943, packing and slaughterhouses handled 6,698,000 beef cattle, 11,900,000 sheep, and 3,500,000 hogs. Production of dairy products in 1944 included: 47,332 metric tons of butter and 72,042 metric tons of cheese. In 1943, 28,599 tons of casein were made.

Argentina is the leading manufacturing country of Latin America. The essential elements for extensive development of heavy industry, however, are lacking. Coal and iron deposits are limited and of low quality; waterpower sites are chiefly located in undeveloped areas. Processing of agricultural products is the leading industry, food, beverage, tobacco, and textile industries are important, while leather and chemical manufactures are increasing. Other manufactures include: cement, paper, electrical equipment, tires, glass, pharmaceuticals, and fabricated iron and steel products.

Foreign Trade. The total value of Argentine exports in 1944 was 2,352,881,000 pesos. Of this the United Kingdom received 37 percent; United



REFUGEES

Painting by Cpl. William Teason (Kingman AAF, Arizona), 9th Service Command, and shown in the Army art contests, sponsored by Special Services Division. These produced 215 winning paintings, drawings, sculptures, photographs—exhibited at the National Gallery, Washington during the summer of 1945.



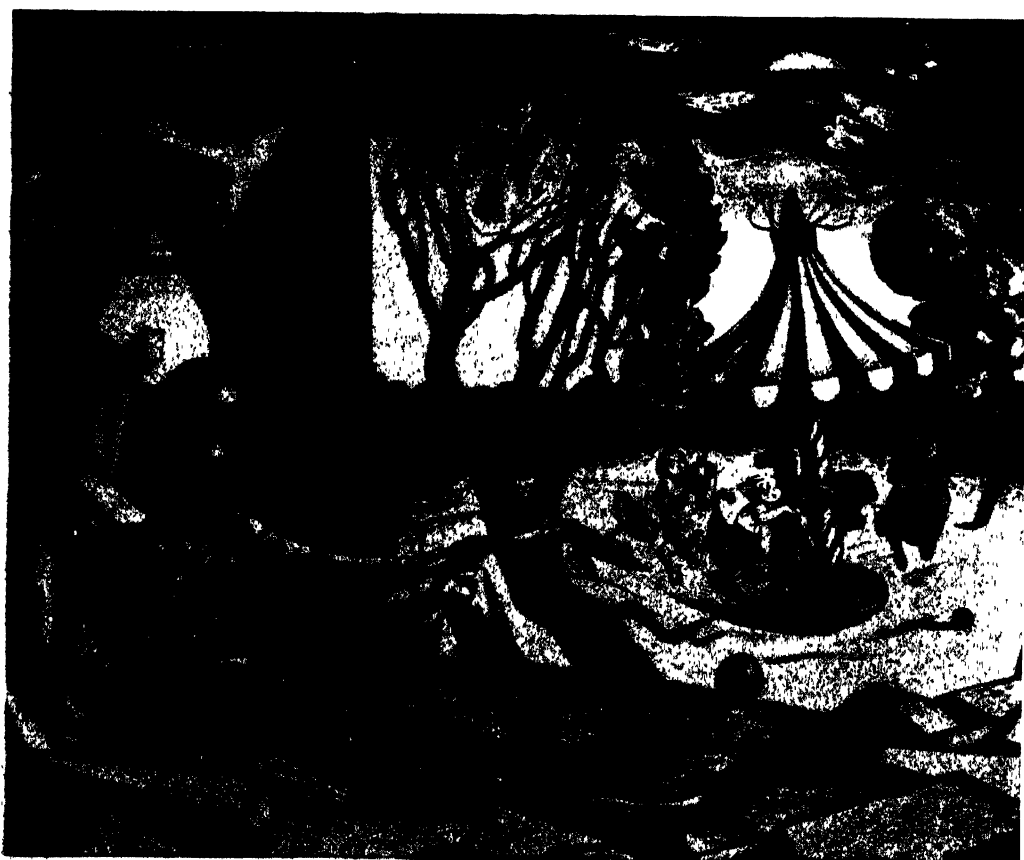
LOW ALTITUDE FORMATION

Painted by Lt. Richard H. Wilt (Green-
ville AAF, S.C.), Fourth Service Command.



TO WHOM IT MAY CONCERN

Painted in tempera by Sgt. Roy Q. Tir-
man. (Ordinance Office, Detroit, Mich.)



THE DUST IS WHIRLING IN THE DUST

Painted in tempera by Pfc. Arthur M. Kraft. (Santa Ana AAB, Calif.)



FOG

From the painting by Jon Corbino, awarded a \$500 prize in the 2nd Annual "Portrait of America" exhibition. (*Pepsi-Cola*)



COCKTAILS

From the painting by Guy Pène Du Bois, awarded the \$1,200 Altman Prize



A FAREWELL TO PISA

From the painting by Edward Laning, awarded the M. V. Kohnstam Prize of \$250 at the 56th annual exhibition of the Art Institute of Chicago. (*Life—Midtown Galleries*)

States 22.2 percent; and Brazil 9.3 percent. Principal exports are agricultural and pastoral products. Wheat, corn and linseed lead the agricultural exports; meat, hides, wool, dairy products, by-products and residues constitute the chief animal products exported. Meat exports accounted for about one-eighth of the total tonnage exported in 1944, and made up one-third of the total value of exports. In that year a total of 786,416 metric tons of meat products were exported of which the bulk went to the United Kingdom. During 1944 Argentina exported 141,861 metric tons of hides and skins. Leading groups of exports in 1944 listed according to value: livestock products, 1,340,164,000 pesos; agricultural products, 596,141,000 pesos; forest products, 39,810,000 pesos; minerals, 26,338,000 pesos.

Argentine imports in 1944 reached a total value of 1,007,154,000 pesos. Brazil supplied 34.2 percent; United States 15.1 percent; United Kingdom 8 percent. Textiles, foodstuffs, paper and wood and their manufactures, and chemical products comprised Argentina's chief imports. In 1944 the three most valuable groups of imports were: textiles, 261,964,000 pesos; wood and manufactures, 128,941,000 pesos; food, 109,755,000 pesos. Other important groups of imports were: paper, cardboard, etc.; chemicals, drugs, oils, paints; fuels and lubricants; iron and manufactures.

HARRY B. MURKLAND.

ART. On the eve of the great war, with American art-students hurrying back as quickly as possible to the safety of the homeland, watchful observers said: "This war is going to be terrible for all the world but at least we shall have one recompense: our artists now will be obliged to go native. This puts a period to the business of imitating European styles in painting. We shall perfect our own."

Much of this, it now appears, was wishful thinking. It is true that many of the younger painters, impressed by the publicity and high prices which were gained by the Iowan, Grant Wood, did hie themselves back to the districts they had come from, and almost over night, or so it seemed, we had an enormous number of proficients plying the local legends everywhere and demanding support from local museums—for another development during the recent years was a vast increase in minor museums. Every small town had one. And shortly, with so many artists being "local," it was discovered that that was not so easy a way to become distinguished as it had been. Even Grant Wood, John Steuart Curry and Thomas H. Benton, who were the first to lead the cohorts into the homespun regions, were no longer so heartily acclaimed as they had been. There was no doubt but that all these men were valiantly forgetting the styles of Europe; but were they developing first rate styles of their own? This was not so sure. Apparently more than patriotism is required for the founding of a style, although patriotism and the other warm emotions are, naturally, a help. Nor is patriotism a complete urge to collecting, since it pushes the collector only just so far. It is an unpleasant implication to saddle upon humanity and yet at this moment it would appear that fashion and finance are the chief factors that have led recent American citizens into picture-buying. Certainly fashion and finance had something to do with a marked change in the public taste made evident during the year. For many reasons 1945 was historic, but in the annals of art, it will be the year in which we "went modern," in which the taste for abstract art grew.

It is too early to analyze all the forces back of this astonishing change, but some of them may be noted. One potent influence was undoubtedly the presence in America of a number of internationally famous modernists. Among these were; Fernand Leger, Andre Masson, Marcel Duchamp (painter of the famous "Nude Descending a Stairway"), Yves Tanguy, Kurt Seligmann, Max Ernst, Jacques Lipshitz, Chagall and of course the indubitable Salvador Dali. All these men have pronounced and unmistakable styles and when they took part in general exhibitions their art was dominant. This was not lost upon our native artists, nor upon the collectors. Another point not lost was the fact that the dealers in modern art were reporting extremely good sales. Still another opinion-making episode was the sale in the spring of the Walter P. Chrysler, Jr. collection of modern art. Mr. Chrysler's collection had grown to unwieldy proportions and he decided to let some of his less important holdings go. Everybody in the art world knew that Mr. Chrysler was weeding his collection out. There was no illusion about that. It was supposed he would have to take a loss in order to better the standard of his collection as a whole. But he did not take a loss. The prices he received for his "discards" were sensationally high and the profits upon the whole transaction were most impressive. For instance, a panel by the late Piet Mondrian consisting of black lines on white with a rectangular patch of plain color in one corner, and which, a few short years ago would not have been considered a work of art at all, fetched \$1,400. The memorial show of Mondrian's work at the Modern Museum had made a profound impression upon the public, and had probably given him an "auction rating." The memorial show of Kandinsky at the Museum of Non-Objective Art had also been very effective.

It was not, however, until the Whitney Museum's annual show of "contemporaneous American art," which occurred in the autumn, that it became apparent how deeply this agitation for modern art had seeped into the native consciousness. All the galleries on the lower floors of the museum—those usually considered the most desirable—were given over to the works of the abstract painters, and the artists dealing with easily legible subject matter were relegated, for the most part, to the upper floors. The effect of this distribution of the pictures cannot have been intended, yet it was inescapable. Those who ardently champion abstract art were jubilant at the emphasis thus given. Those who insist that art must have subject matter clearly expressed were disappointed. In any case the great number of non-representational pictures marked a significant change in the Whitney Museum exhibitions, hitherto so conservative. Whether or not it was good modernism is another matter. The press, characteristically pleased with novelty, was on the whole kind to the show. One of the exceptions was this writer who, in a burst of annoyance at the American artist's willingness to accept a position among the second-rate, labelled the collection dull and insisted that no one among the new abstractionists came within hailing distance of the aforementioned Parisian modernists. It might be added, for the sake of the record, that the American modernists of most promise at the present time are Matta, Morris Graves, Rufino Tamayo and Mark Tobey. All four seem to be travelling upon their own power and have already arrived at considerable distinction. They will be watched hopefully.

At the Metropolitan Museum of Art two out-

standing events occurred, one a great popular success and the other a feast for the experts. The first was the show of Chinese Mandarin robes, the largest and most important ever shown in America, dramatically lighted to show the effects the superb costumes made when worn in temples or at court; and the other was the re-installation of the Museum's own collection of Greek sculpture. The Museum does not possess a Venus de Milo nor a Dying Gladiator but it has an impressive assortment of corroborative smaller pieces that provide experts with sidelights on Greek history and artists with incentives to perfect their own styles. The activities in all the great museums of America were strenuous throughout the year, and many of them gained important masterpieces. The Frick Museum in New York showed for the first time a large bronze bust by Coysevox and important paintings by Chardin, Constable, and Goya. The late Percy S. Strauss's collection of Italian primitives was presented to the new museum at Houston, Texas. Samuel H. Kress made a further gift to the National Gallery at Washington of eighty paintings and twenty-six sculptures. The same institution received from Lessing J. Rosenwald an addition to his former donation of 1,740 prints. Just as the year was closing the National Gallery received a large cargo of great masterpieces of art from the public and private collections of Germany. It was announced at once that this importation was a matter of temporary expediency and that the pictures were eventually to be returned to the galleries to which they belonged. It was not announced that they were to be publicly shown in Washington but the mere presence of these works of art in the National Gallery is looked upon as an indication that such an exhibit may be held. If it does the event may easily be the most interesting of the new year.

HENRY MCBRIDE.

ASIA. Including the Asiatic part of the U.S.S.R., the continent of Asia has an area of about 16,752,600 square miles and a population estimated at 1,200,000,000. See the separate articles on ARABIA, CHINA, INDIA, JAPAN, and the other Asiatic states and territories.

ASSEMBLIES OF GOD, General Council of the. A religious organization incorporated in Arkansas in 1914 by a group of independent pastors interested in a distinctively evangelistic type of mission work. Headquarters, 336 W. Pacific Street, Springfield, Mo. For statistics, see RELIGIOUS ORGANIZATIONS.

ASTRONOMY. With the end of World War II, many astronomers and astrophysicists were released from secret war-related endeavors to resume their pursuit of pure science at observatories and technical laboratories throughout the world. Such significant developments as were announced during the year revealed that the photographic and research programs of many astronomical organizations, although greatly curtailed, were satisfactorily fruitful.

Of special note was the final achievement by scientists employed by the United States government of the release of atomic energy on a large and explosive scale, helping to bring the war to a speedy conclusion. It was recalled that the precise theoretical groundwork for obtaining energy from the interior of the atom was established in the early years of this century by astronomical physicists such as Einstein, Bohr, and Rutherford. The power (except heat) at present obtainable in

large amounts is the result of conversion of but a minute amount of mass into energy, being largely incidental to the atomic fission which divides a uranium or plutonium nucleus into two nearly equal parts. It may therefore be readily appreciated that the present success is just a small step toward obtaining all the energy latent in any total mass annihilation. Einstein has shown that the energy equivalence of mass is given by the simple formula $E = MC^2$, where C represents a velocity of light of about 3×10^{10} cm/sec. In more familiar terms, a mass of one kilogram (2.2 lbs.), if totally converted into usable energy, would equal 25 billion kilowatt-hours or the total electrical power output of the United States for a two months period in the year 1939.

Some years ago the Belgian astronomer Lemaitre suggested that a somewhat similar explosion of one gigantic, all-encompassing, original atom may have produced the elements of our existing physical universe, including the Milky Way and other galaxies, our sun and solar system, and all the interspatial debris of meteors, comets, and star-dust. This theory stated further that the observed red-shift in the spectra of remote galaxies is explainable as the evidence of the continuing expansion of our entire universe, following the original cosmic explosion of several billion years ago.

A new theory of the details of planetary evolution was proposed by C. E. von Weizsäcker, of Germany. It is supposed that a spherical shell of gas, rotating about our primitive sun, gradually took on a disk shape within which sub-vortices accounted for the ultimate formation of the planets. A great advantage of this assumed process is that the light hydrogen and helium components of the rotating gaseous mass, in dissipating themselves from the outer edge of the disk, carried away some of the "troublesome angular momentum that constituted the main obstacle to success of so many theories" of planetary evolution.

Work on the 200" telescope at Mt. Palomar, California, was resumed and is expected to be completed about 1947. Announcement was made of the appointment of Dr. Ira S. Bowen as director of Mt. Wilson Observatory, and the administrative merger of Mt. Wilson and Mt. Palomar as soon as the 200" telescope, the largest in the world, is completed. The research program will be under the joint supervision of the California Institute of Technology and the Carnegie Institution of Washington, D. C. Dr. Bowen is well known for his interpretation of the once mysterious solar element "nebulium" as ordinary oxygen and nitrogen in unusual states of electron activity.

A report in the U.S.S.R. Astronomical Circular, by Dr. I. S. Astapowitch, suggests the possibility that the earth has a tail, somewhat like cometary trains. Study of the sun's counter glow, or gegenschein, in the earth's night sky revealed wave lengths which might be expected from the earth's extremely tenuous atmosphere at distances beyond the moon's orbit. This would make a "tail" about 50 earth-diameters long. It is said to consist of minute particles moving in hyperbolic orbits, convex to the sun because of the pressure from its radiation.

A new lunar map, twenty-five feet in diameter—the largest ever made, has been completed by H. P. Wilkins, prominent English selenographer. Based on telescopic observations and photographs, it is to be reproduced on the more convenient scale of 100" diameter, and will provide an invaluable reference chart for astronomers interested in detecting surface changes on the moon.

A. C. Clarke, in the *Journal of the British Astronomical Association*, reviews the possibility of using radar-tracking equipment in solar system parallax determinations. By timing the reflection of radio pulses sent to distant objects, a mechanism is provided believed capable of easily measuring the distance to the moon or planets. Reports have been received of echo-delays corresponding to distances of 700,000 mi; others up to 68,000,000 miles have yet to be confirmed. Topographical details may also be disclosed by the nature of the reflected pulses, and this technique gives promise of telling much about the surfaces of the planets, especially cloud-covered Venus.

Lowell Observatory astronomer Giclas detected in May the periodic return of two well-known comets, Pons-Winnecke, last seen in 1939, and comet Kopff. In April and June, two new comets were discovered by the Harvard Observatory station at Bloemfontein, South Africa.

The total eclipse of the sun on July 9 was widely observed along a path extending from northwestern United States, across Canada, Greenland, Norway, Sweden, Finland, and European Russia. The Royal Canadian Air Force expedition made a complete aerial record of the spectra of the solar corona and chromosphere throughout totality, for study of polarization effects, also direct camera photographs of the corona and prominences, these being the first such records made at an altitude of 30,000 feet. Extensive programs on timing of contacts, shadow-bands, meteorological data, flash spectra, sky-light intensity, radio interference, and corona measurements were successfully completed in the United States, Sweden, and elsewhere. At Butte, Montana, the New York City Amateur Astronomers Association's expedition obtained what is believed to be the first full-color photograph of the totally eclipsed sun enveloped by the descending shadow-cone of the moon.

On August 28, the Swedish astronomer Dr. Nils Tamm of the Kvistaberg Private Observatory found another nova, or exploding star, in the constellation of Aquila. This was the third nova discovered by Dr. Tamm in the same region of the sky. Its observed magnitude was 7.5, just below naked-eye visibility. Analysis of its spectra shows two surrounding shells of gas expanding at speeds of 2100 and 1300 km/sec. Based on a computed distance of 8000 light-years, the nova's absolute magnitude, or intrinsic luminosity, is -6.8 , or about 40,000 times as bright as our sun would be if placed at a comparable distance.

On December 18-19, a total eclipse of the moon occurred, the last for at least three years, according to computations made thus far by astronomers of the United States Naval Observatory.

GEORGE V. FLACHY.

AUSTRALIA. A self-governing dominion of the British Commonwealth of Nations. Capital, Canberra. Australia proper includes 6 states and two territories, with a total area of 2,974,781 square miles. The Commonwealth of Australia also has political control of Papua, Norfolk Island, the Ashmore and Cartier Islands, the uninhabited Australian Antarctic Territory and Nauru (mandated to the British Empire). The territory of New Guinea, comprising Northeast New Guinea, the Bismarck Archipelago and part of the Solomon Islands, is administered by Australia under a League of Nations mandate.

Government. Executive power is vested in a Governor-General appointed by the Crown and in a ministry responsible to the Federal Parliament.

There is a Senate of 36 members (6 from each state) elected for 6 years and renewed by half every three years, and a House of Representatives of 75 members apportioned among the states on a population basis and elected for three years. Governor General, the Duke of Gloucester (assumed office early in 1945). Prime Minister, Joseph B. Chifley, chosen by the Labor Party to succeed John Curtin, who died on July 5, 1945.

Events, 1945. Australia's transition from war to peace was gradual but decisive. It was announced at the end of August by the leader of the Opposition, Mr. A. W. Fadden, that the Advisory War Council would be dissolved immediately. The Council was constituted in October, 1940, after the Labor Party had refused to join the National Government in Parliament, which the general election had almost evenly divided. All of the original members were present at the final meeting on Aug. 31, except Mr. R. C. Menzies, who withdrew early in 1944, and the late Prime Minister John Curtin.

The cost of the war to Australia, according to figures published in October, was more than £2,000,000,000. Two of every three men between 18 and 40 served at some stage on a full-time basis in the fighting services. Casualties were 95,561, including 29,365 known deaths from all causes and 6,009 men missing. Prisoners unaccounted for at the end of September were approximately 4,000.

Steps were immediately taken by the federal government to relax wartime controls at a pace calculated to avoid mass unemployment and to stimulate the building industry. All powers of direction to jobs by the Government were relinquished, and in selected industries employers were permitted to seek and employ labor without first seeking government permission. Bans on starting new industries without official permission were lifted, and war production and war contracts were tapered off.

Foreign Affairs. After hostilities with Japan ended the Australian Government consistently maintained that it had received insufficient consideration in the negotiations. In a statement issued on Aug. 24, Herbert V. Evatt, Minister of External Affairs, said that the United States Department of State had rejected Australia's claim to have General Sir Thomas Blamey represent it in Japanese peace discussions, that Britain had attempted to relegate the Dominion to a subordinate status, and that the Australian Government had resorted to direct dealings with Gen. Douglas MacArthur and the United States Minister at Canberra to obtain recognition of Gen. Blamey at the surrender ceremonies.

Evatt reached London on Sept. 6, in time for the last of a series of conferences held by British Foreign Secretary Ernest Bevin in preparation for the meeting of the Big Five Foreign Ministers, and presented Australia's case for a more severe attitude towards Japan. Evatt stayed some weeks in Britain, and acted in the place of S. M. Bruce, retiring High Commissioner for Australia, until the arrival of the new resident minister, J. A. Beasley, who was Minister of Defense in the Australian Cabinet. At the meetings of the Far Eastern Advisory Commission in Washington in November, Evatt was named chairman of the policy subcommittee. In an address before the National Press Club in Washington on Nov. 16, the Australian Minister for External Affairs challenged the need for continuing the wartime practice of determining international issues by unanimous agreement of the Big Three and called for more democratic procedure.

Australia's participation in the United Nations Conference for International Organization at San Francisco from April to June was prefaced by an official visit to France by Evatt, High Commissioner S. M. Bruce and Army Minister F. M. Forde. Evatt discussed with French Foreign Minister Bidault the association of France, Britain, United States and Holland in establishing control of the Pacific and the question of trusteeships. The Australian delegation at San Francisco, under the chairmanship of Sir Frederick Eggleston, Minister to the United States, was active throughout the conference in offering amendments for the protection of middle and small powers. Australia was represented at the conference of the International Labor Organization which opened in Paris on Oct. 15.

The termination of lend-lease arrangements by the United States in August was followed immediately by the curtailment of Australian purchases in this country. The Australian Government put a value of \$835,004,000 on supplies, services and facilities provided through June 30, 1945 to all United States forces, as against American lend-lease exports to Australia in the same period amounting to \$1,154,000,000. Millions of dollars' worth of United States Army Air Force communications were transferred to the Royal Australian Air Force after the end of hostilities with Japan.

Official figures released in Canberra on July 22 showed that marriages involving American men and Australian girls reached 5,957 at the end of 1944 but that a large number of such marriages failed. Forty-eight per cent of the Americans married Queenslanders, 21 per cent Victorians and 19 per cent residents of South Wales. On July 20 Prime Minister Chifley introduced in the House of Commons a bill which would enable a girl who married an overseas service man since the beginning of the war to institute divorce proceedings in Australia without the necessity of travelling to the husband's homeland.

Australia's first consulate general in the United States was opened in New York City on Nov. 14 with C. V. Kellway, former deputy director of Australia's war supplies procurement office in North America, as consul general. On Feb. 2 the Australian cabinet appointed Alfred Stirling High Commissioner to Canada. Members of the Australian delegation to the United Nations Conference at San Francisco visited Canada before returning to their homes. The new Soviet Minister to Australia, N. M. Lifanov, presented his credentials to the Australian Prime Minister on July 12.

Political Changes. The Duke of Gloucester, new Governor General of Australia, reached Canberra on Jan. 29 to assume his post, to which he was appointed in November, 1943, and was sworn in the following day. On April 18 the Duke and Duchess arrived at Hobart for a five-day visit to Tasmania.

Labor Prime Minister John Curtin, who took office two months after Pearl Harbor, died in Canberra on July 5. He was buried near Perth, in Western Australia. Because of a protracted illness he had been absent from the San Francisco Conference. The death of the Prime Minister while holding office brought into direct operation the constitutional royal prerogative. The Governor General of Australia, the Duke of Gloucester, who was in the Solomon Islands visiting Australian troops, flew at once to Canberra to perform his vice-regal function in appointing a new first minister to the Crown. The Duke chose Army Minister Francis M. Forde, who had been acting prime

minister during Curtin's illness, except at the time of Forde's absence at San Francisco, when Commonwealth Treasurer Joseph Chifley took his place.

Chifley was elected Prime Minister on the first ballot of the Parliamentary Labor Party on July 12 and thus became the 16th prime minister of Australia. The party decided not to exercise its option to elect the entire list of ministers afresh, but filled the one vacancy with Herbert V. Johnson, general president of the Australian Workers' Union, thus preserving Western Australia's representation in the Cabinet. Chifley, a native of Bathurst, New South Wales, and the son of a blacksmith, entered politics from the ranks of the Railway Locomotives Engine Drivers' Union. He first entered Parliament as a labor member in 1928, and in 1935 he was a member of the Royal Commission on Monetary and Banking Systems, a position which furnished background for his work as Commonwealth Treasurer and his activities in preparing the banking legislation passed in Australia in 1945.

The new Prime Minister and his ministry were sworn in by the Governor General on July 13, after the resignation of F. M. Forde, whose seven-day term as prime minister was the shortest in Australia's history. There were few Cabinet changes. The Prime Minister retained his post as Commonwealth Treasurer and assigned Herbert Johnson, the new member, the portfolio for the Interior. The creation of two new offices, that of Minister of Housing, added to the duties of Hubert Lazzarini, Minister for Home Security and Works, and that of Immigration, placed with Information under Arthur A. Calwell, indicated the new Prime Minister's interest in the further development of the social services. There had been no important cabinet changes since Feb. 1, when the late Prime Minister had reassigned portfolios.

Premier of Western Australia Willcox was succeeded on July 31 by F. J. S. Wise, former Minister of Lands and Agriculture in successive Western Australia governments, who became at the same time leader of the State Parliamentary Labor Party. A new Labor Cabinet was set up in Victoria on Nov. 21, with John Cain, Labor Party leader, as Premier and Treasurer.

Banking Control. The Government's bill providing for the extension of federal control of Australian banks was introduced in the House of Representatives on March 8 by Commonwealth Treasurer Joseph Chifley. In a pre-session meeting on Feb. 20 the Parliamentary Labor Party decisively rejected a proposal by extremists in the party for the nationalization of the trading banks. The Government's program as presented to the House took the form of two bills. The first gave permanence to the wartime controls of trading banks which were voluntarily accepted from the short-lived Fadden Government of September, 1941, and which were made legal by the national security regulations promulgated by the present government soon after it took office in October of that year. The second extended the functions of the Commonwealth Bank and abolished the Commonwealth Bank Board.

The bills reflected the Labor Party's long-cherished conviction that in the depression years of 1929-33 the Commonwealth Bank Board and the trading banks pursued an unnecessarily harsh deflation policy and thus caused wide-spread suffering. In the 1945 bills the Commonwealth Bank was empowered to direct the loans and investment policies of the trading banks, control interest rates,

and take over control of foreign exchange. The Commonwealth Bank was empowered to set up a separate division to carry on a general banking business like that of the trading banks.

The banking bills aroused strong favorable and opposing sentiments in Australia as they passed through the several stages in both houses. This was heightened when Treasurer Chifley refused to accept any vital amendments to the bills. The House concluded its approval of the bill on June 29 and the Senate on July 26. By Aug. 2, when both houses recessed until Aug. 29, the trading division of the Commonwealth had opened new branches in accordance with the policy prescribed in the new banking legislation that the Commonwealth Bank should actively compete with private banks.

Australia's financial position at home and abroad was not adversely affected by the introduction and passage of the banking legislation. Australia's largest war-time conversion operation, that of £60,000,000 war loan from a five per cent to a 3½ per cent basis, announced in March, was successfully completed at the end of May. Since Australia had in the past paid up to 6 per cent for sterling loans, the result showed general confidence in the Australian financial situation.

Nationalization of Air Lines. The Government's intention of taking over all interstate civil airlines operations in Australia, announced in November 1944, was expressed in the Nationalization of Air Lines Bill which passed through all of its stages unamended in the House of Representatives on July 31. The nationalization proposal produced active opposition at all stages. It was repeatedly charged by the opposition that the step was a violation of Curtin's pledge in the 1943 election that no industry would be socialized in war time, and that the Government was illegally assuming power over air transport which was refused in the 1944 constitutional referendum. (See YEAR BOOK for 1944, p. 55) In September the Australian National Airways Proprietary Ltd., owners of most of the Australian airlines, took steps to test the validity of the legislation by applying to the High Court for an injunction restraining the Government from interfering in any way with the company's operation of its airline services.

The England-Australia air route was reopened on Feb. 1, after more than four years of difficulty and improvisation. The first direct flight from Sydney to London brought a copy of the *Sydney Morning Herald* for June 2 to the office of the *London Times* on the evening of June 5. On Nov. 2, the R.A.A.F. transport command's 7,000-mile regular four-day service to Tokyo was begun.

Industry and Employment. A White Paper tabled in the House of Representatives on May 30 by Minister for Postwar Reconstruction Dedman assured the country's servicemen, servicewomen, and war workers of peacetime employment. The document, entitled "Full Employment in Australia," described a works program covering housing, harbors, airports, power projects, irrigation and other construction. It expressed the Government's intention of keeping the total expenditure at a level sufficient to employ all resources, with the aid of the new banking system's powers of regulating the flow of credit to ensure stability in capital spending. A section of the press reacted unfavorably to the proposals, arguing that they would require further controls to an intolerable point.

Throughout the year, but at an accelerated speed after the fall of Japan, Australian industry made plans for peace-time expansion. In April it

was announced that General Motors-Holdens Ltd. had reached an agreement with the Australian Government under which it would manufacture cars in Australia with the use of local raw materials and facilities wherever possible. The Government reserved the right to assist other private concerns to enter the field. The large Broken Hill Proprietary Company, Ltd. and associated companies announced in October their plans for spending over £A.7,000,000 on works to increase steel supplies. In November Prime Minister Chifley approved the building of two oil refineries, one in New South Wales and the other in Victoria, by a joint Australian-American Company. Approval was granted on condition that 60 per cent of the shares should be Australian-held and that the company should import its own raw materials on a sterling basis. At about the same time Courtaulds' plans for establishing a rayon plant in New South Wales was announced from Sydney. The staff of 4,000 at the new factory was to be Australian, except for experts from Britain. Commonwealth plans included the standardization of railway gages wherever practicable and the development of Northern Territory.

Industrial disputes in coal, iron, steel, and shipping industries in the final months of the year were allowed to proceed without decisive action by the Government, although Prime Minister Chifley repeatedly gave warning of their disastrous effects upon the Australian economy. Speaking in Melbourne on Nov. 26, Chifley told the coal miners that he would not tolerate dictation from miners or any other union and that he supported the New South Wales Trades and Labor Council's advice that the coal strike be settled by arbitration. Two days earlier Chifley had described the trade union movement in New South Wales as chaotic, with the rank and file of some unions refusing to acknowledge their elected leaders. He said that it was a comic opera situation when he was obliged to resort to the dollar pool to buy steel to keep at work in South Australia people who were financially supporting the New South Wales strikers. The steel strike in New South Wales, which originated in a dispute at the Broken Hill Proprietary over an employee's change of job, was at this time in the hands of the New South Wales Industrial Commission.

A scheduled labor-management conference was postponed on Dec. 2 until better conditions should prevail. Seamen on all coal ships out of New South Wales stopped work on midnight of Dec. 1. Coal mines throughout the state were shut down and a general strike in other areas was threatened. By Dec. 10 Sydney was blacked out because of cuts in gas and electricity supplies. Shipments for Tasmania were affected and commerce with New Zealand was threatened. Up to this time the Commonwealth Government maintained a hands-off attitude, possibly because of the importance in the dispute of the struggle between left-wing and right-wing labor factions.

Immigration Policy. The problem of increasing the population of Australia through immigration was under consideration throughout the year. Army Minister Forde, writing in *The Times* (London) on Jan. 26, emphasized the urgency of a larger population as a means of defense, in view of the fact that an island continent of three million square miles must now be held by a total population of only 7,300,000. He said that Australia should aim at a target of 20,000,000 by the end of the present century, with the migrants coming largely from Britain. Speaking on the same sub-

ject in Canberra on Feb. 12, Forde said that in addition to the hoped-for steady flow of British migrants, Australia would welcome Continental Europeans. The Commonwealth, he continued, had already decided to bring to Australia within three years 51,000 orphan children from Greece, Yugoslavia, Poland, Norway, the Netherlands and other areas. It was announced from the capital in April that these children, who will be wards of the state, will have their primary education in large towns, their secondary in country centers. The experience of caring for British evacuees will be utilized in developing the scheme.

Arthur Calwell, newly appointed Minister for Immigration, told the House of Representatives at Canberra on Aug. 2 that Australia and Great Britain had agreed in principle to free passages for British demobilized service men and women, and their dependents, who wished to emigrate to Australia, as well as to assisted passages for civilians. No large-scale emigration was to be undertaken, however, until Australia had successfully demobilized and re-employed the members of her own fighting forces and until the housing and slipping situation had improved. By the end of the year the Government was prepared to admit 70,000 immigrants annually and, in view of the shortage of migrants of British stock, to admit other nationalities.

Food Production. The drought which was increasing in severity at the end of 1944 was finally broken by rains in June, 1945, but not until it had caused damage which was to be felt for a long time. In grazing areas the feed could not be restored immediately and the problem of maintaining stock remained acute. While the drought lasted sheep were kept alive in some instances by hand-feeding. Supplies of grain for pigs, poultry, and dairy cattle were imported from the United States. In all, three-fourths of the Australian sheep country was drought-stricken and large areas in New South Wales, Victoria and South Australia were virtually denuded of stock. Cattle losses were less severe, because of the greater mobility of cattle and because the cattle areas were less seriously affected. Many had to be killed, however, with the result that meat exports to the United Kingdom suffered less than was expected. Dairy products seriously declined and there was a disastrous mortality among farm horses. By October the outlook was better. Generous rainfall further improved the crop situation. At the end of October the Australian wheat crop was estimated at 135,000,000 bushels, only 3,000,000 bushels below the average.

In the last three months of the year a movement to send gifts of food to Britain, to fill a part of the gap caused by the stoppage of Lend-Lease, gathered momentum. Warships returning to Britain undertook to carry the foodstuffs, and on Nov. 9 the battleship King George V took the first 100 tons of the Victorian Government's gift shipments. Food from Sydney was consigned to a second warship. The South Australian Government pledged £A.10,000 and appealed for large private donations, with the assurance that all gifts would be carried free on the state railways. After a week's visit to Tasmania the Duke of York left with 1,133 cases of food for transshipment to the United Kingdom. The shipments from Australia included jellies and jams, and a variety of canned goods.

Tax Reduction. In the budget introduced in the House of Representatives on Sept. 7, 1945, the Australian Prime Minister and Treasurer, J. B. Chifley, announced a reduction of 12.5 per cent

in the income tax. "Although there appears to be no case for an immediate reduction in taxation at the present time," Chifley said, "it is felt that if no relief were granted now, national production might suffer because of the harmful effects on incentive." The reduction, effective immediately, represented 6.25 per cent for the last half of the current year. Corporate taxation was not altered but stockholders benefited from the reduced individual rates. In order to meet the cost of the social services a social service contribution, entirely separate from the ordinary income tax, was introduced at the rate of 7.5 per cent on present taxable incomes. The combined income tax and social service contribution was not to exceed 87.5 per cent of the existing income tax.

A luke-warm reception was given to the announcement of the tax reduction, chiefly on the ground that it was not sufficiently generous. After the change the Government would still be collecting about twice as much as in its first year of office, during the costliest phase of the war. The financial situation in Australia at the end of the year was far from easy. The cost of the social services was growing and many new enterprises, including the pressing needs of employment, housing and land development, had scarcely begun to make their requirements felt.

Population. More than one-half of the 7,300,000 people in the country live in large coastal towns and cities, the largest of which are Sydney, Melbourne, Adelaide and Brisbane. Vital statistics of Australia show an increasing birth rate (17.9 per thousand in 1940 to 19.1 in 1944) and a decreasing death rate. Civilian deaths fell from 74,486 in 1943 to 69,596 in 1944.

Education and Religion. Elementary education in Australia is free and compulsory, with less than four per cent illiteracy among the adult population. Chief religious affiliations, in the order of their numerical strength, include the Church of England, Roman Catholics, Presbyterians, Methodists and Baptists.

Production. Sheep raising in Australia (125,000,000 head) yields one-fourth of the world's wool supply. The value of wool exports in 1939-1940 amounted to \$185,000,000, a figure which dropped when exports in bales decreased from 3,063,000 in 1938-1939 to 1,959,000 in 1942-1943 because of increased local demands. Approximately 1,205,120,000 pounds of beef, another important primary product of Australia, are produced per year. Primary production in toto (including mutton, lamb, pork, butter, cheese, wheat) was valued at \$604,000,000 in the last normal year, 1939. In contrast to that figure, manufacturing industries in the country produced goods amounting to \$215,190,170.

Foreign Trade. Imports during the year 1942-1943 were valued at £ (stg) 212,106,701, and exports amounted to £ (Australian) 123,052,435.

ALZADA COMSTOCK.

AUSTRIA. A state of central Europe (see EVENTS below). Area: 32,432 square miles. Population (1939): 6,650,000. Vienna, the capital, had 1,918,462 inhabitants; Graz, 210,175; Linz, 131,423. See YEAR BOOKS for 1938 and 1939 for prewar statistics.

Events, 1945. The fall of the Third Reich saw the first victim of Hitler's aggressions emancipated from Nazi rule after seven years of subjugation. Liberation was followed by Allied control rather than by the full independence envisaged at the Moscow Conference of 1943. It was likewise

followed by currency inflation and acute economic distress. Important steps were nevertheless taken toward a new Austrian democracy which would ultimately assume responsibility for its own internal affairs.

Exit Hitler: Re-enter Renner. Allied plans for sharing military control of Austria were prepared, though not publicized, at Yalta while Marshal Fedor I. Tolbukhin's 3rd Ukrainian Army fought its way across Hungary toward Vienna. Soviet broadcasts appealed anew for an uprising against the enemy and pledged respect for Austria's integrity and social system. Red units swept into the capital early in April, aided by anti-Nazi partisans. The final street battles were less destructive than those in Budapest. On April 12-13 all of Vienna fell to Soviet forces, which took 130,000 prisoners. On April 28 units of Lt. Gen. Alexander M. Patch's U.S. 7th Army in Bavaria crossed the Austrian border near Berchtesgaden and soon took Braunau (Hitler's birthplace), Salzburg and Linz, and joined Soviet detachments in clearing the provinces of the remnants of the beaten Wehrmacht.

Along with Léon Blum, Nicholas von Kallay, Nicholas Horthy, Jr., Hjalmar Schacht, Richard Schmitz (former Mayor of Vienna) and other notables, Kurt Schuschnigg, last pre-Nazi Chancellor, was liberated in northern Italy early in May after seven years of relatively mild confinement in various Nazi camps. He disclaimed all future political ambitions, although year-end rumors spoke of his possible appointment as envoy to the Vatican. At the same time Arthur Seyss-Inquart, Austrian "Trojan horse" of 1938, was seized in northwestern Germany by Canadian forces. In its first list of over 300 Nazis to be put on trial as war criminals (issued December 3), the new Austrian regime included Seyss-Inquart, Ernest Kaltenbrunner and Baldur von Schirach, all on trial in Nürnberg, as well as Anton Rintelin, Wilhelm Glaise-Horstenaus, Theodor Habicht and Alfred Frauenfeld.

With Soviet approval, an Austrian Provisional Government was announced in Vienna on April 28 under the 74 year-old Social Democrat, Dr. Karl Renner, first Chancellor of the Republic of 1918 and signatory of the Treaty of St. Germain. Renner now assumed the Chancellorship and the Ministry of Foreign Affairs, which he had held in 1920. His Cabinet included 3 Social Democrats, 4 Christian Socialists ("People's Party"), 3 Communists and 3 non-party men. Owing to the absence of prior consultation, due apparently to various misunderstandings rather than to any deliberate Soviet policy, Washington and London withheld recognition of the Renner regime. Austrian "independence" was nevertheless proclaimed by the new authorities, who rescinded Nazi statutes, restored Republican legislation, outlawed the NSDAP (National Socialist Party) and made provision for punishment of its members. Throughout the year, however, Austria remained occupied territory rather than an autonomous community.

Allied Occupation. Sundry controversies delayed the implementation of joint military control. On May 24, Field Marshal Sir Harold Alexander proclaimed the establishment of an Anglo-American Military Government for the Austrian areas to be assigned to the forces under his command. A month later General Mark Clark was appointed commander of American forces in Austria in anticipation of the creation of 4 occupation zones, with Vienna, like Berlin, to be divided into 4 districts. This arrangement was gradually brought into being in the provinces, but with no common

policy accepted by the occupying authorities. Americans were alleged to be tolerating the retention of Nazis in many posts, while Russians, in addition to living off the country (like the French in the Tyrol), were said to be indulging in numerous depredations and abuses.

Not until early August did Anglo-American forces enter Vienna, whose people were facing currency chaos and famine. The illness of Marshal Ivan S. Konev, coupled with divergent views regarding the food problem, produced further delays, as did the hesitant policy of Washington and London toward the Renner Government. On August 8, a joint Kommandatura was set up in the *Innere Stadt* of the capital. But the Allied Control Council for Austria did not begin to function until mid-September, with Marshal Konev and Lt. Gens. Clark, Emile-Marie Bethouart and Sir Richard McCreery representing the Big Four.

Recognition. In deference to British desires, Chancellor Renner moved in September to broaden his regime. On September 26 a Provincial Conference of representatives from 9 provinces upheld the Renner Cabinet and endorsed its pleas for the abolition of the demarcation lines between the zones, the reduction of the occupying forces and the early restoration of Austrian sovereignty. It further recommended a general election and strengthened the influence of the conservative-clerical People's Party at the expense of the Communists by increasing its representation in the Government and taking control of police and elections out of the hands of the Communist Minister of the Interior, Franz Kohnner.

Harmony between the U.S.S.R. and the Western Powers was not promoted by the London Conference of Foreign Ministers nor by Soviet seizure of the Zistersdorf oil fields early in October, following the rejection by the Cabinet, on Anglo-American advice, of Soviet proposals that half the shares in a projected Austro-Russian oil company be granted to the Soviet Union. These and other properties were regarded by Moscow as part of the "German assets" assigned to the U.S.S.R. by the Potsdam accords of August. On October 7, however, London and Washington indicated that recognition would be granted to the Renner Government. On the 20th the Allied Control Council announced: "The authority of the Provisional Austrian Government, broadened as a result of the Provincial Conference, shall extend under the guidance and control of the Allied Council to the whole of Austria. One of its main duties will be to hold free elections as early as possible and not later than December 31, 1945."

New frictions followed with the revelation, on October 21, that Moscow had offered to exchange diplomatic representatives with Vienna, while Washington and London contemplated only *de facto* recognition, with foreign affairs among the areas of administration reserved to the Allied Council. This issue was resolved in November by the elevation of the political advisers of the members of the Council to the rank of "Political Representatives to the Austrian Government." By the end of the month Allied controls were functioning more smoothly, thanks to the amicable relations which had developed between Clark and Konev. On January 7, 1946, Washington, London, Paris and Moscow announced formal recognition of the Austrian Government.

Elections. In preparation for a popular poll, the Renner Cabinet ordered a re-examination of voting lists to insure the exclusion of all Nazis from the franchise. Both Social Democrats and

Communists accused the People's Party of seeking to enlist Nazi support and appealing to the clerical-fascist elements formerly represented in the *Heimwehr* and the Christian Social Party of Dollfuss and Schuschnigg. Leopold Figl, elevated to leadership of the Party early in September, was above such reproaches, but some of his associates were not. On November 11 the Party's Vice President, Baron Raoul Bumballa, resigned in protest at clerical influences and at the anti-Semitic speeches of the Honorary President, Leopold Kunschak.

On November 25 some 3,500,000 Austrians (62 per cent of them women) cast their ballots for members of a National Assembly and Provincial Diets in the first free election in 15 years. The electorate was smaller by 700,000 than it had been in 1930, most of the absentees being war prisoners or disfranchised Nazis. The People's Party, despite (or because of) its fascist taint, won 85 seats in the Assembly, the Social Democrats 76 and the Communists, always weak in Austria and now discredited by the Soviet occupation, only 4. On November 28 Renner submitted his resignation to the Political Council (a committee of party leaders) but was asked to carry on until a new Cabinet could be formed. On the following day the Constitution of 1920, suspended by the Dollfuss dictatorship in March 1933, was restored to force, pending possible proposals for change by the new parliament.

The Figl Government. On December 4 the Political Council named Figl as Chancellor-designate, with all parties agreeing to continue the coalition. Figl appointed Kunschak as President of the National Assembly and prepared a list of Ministers for approval by the Allied Council. Konev vetoed Social Democrat Andreas Korp for having held office under the Nazis and Julius Raab and Vincent Schumy of the People's Party as clerical-fascists. The new Cabinet as finally approved by the Council on December 18 was as follows:

Chancellor and Foreign Minister—Leopold Figl, People's Party.
 Vice Chancellor—Adolf Schaerf, Socialist.
 Minister without Portfolio to act in foreign affairs—Karl Gruber, People's Party.
 Minister without Portfolio—Alois Weinberger, People's Party.
 Minister of the Interior—Oskar Helmer, Socialist.
 Under-Secretary for the Interior—Ferdinand Graf.
 Education and Culture—Felix Hurdes, People's Party.
 Justice—Joseph Gero, Nonpartisan.
 Finance—George Zimmerman, Nonpartisan.
 Agriculture—Joseph Kraus, People's Party.
 Trade and Construction—Eugene Fleischhaeckel, People's Party.
 Transport—Vincent Vebles, Socialist.
 Power Economy and Electrification—Karl Altmann, Communist.
 Food—Hans Frenzy, Socialist.
 Social Welfare—Karl Maisel, Socialist.
 Minister of State Property and Planning—Peter Kraulain, People's Party.
 Under-Secretary for State Property and Planning—Karl Waldbrunner, Socialist.

On December 20 the two chambers of parliament, meeting jointly, unanimously elected Renner President of the Republic for a 6-year term. He at once swore into office the members of the new Cabinet who assumed responsibility to the National Assembly or lower house.

Unfinished Business. At the beginning of 1946 numerous problems confronting the new Government remained unsettled. Whether a new Constitution for the Second Republic was to be prepared was still undecided. A complex scheme of currency revaluation had been inaugurated in December but was by no means completed. The "German assets" subject to removal by the U.S.S.R.

were also not defined as yet to the satisfaction of all concerned. Famine was averted by UNRRA, but no solid basis of independent national sustenance was yet in sight. On British initiative, negotiations were opened in December for a substantial reduction of the 100,000 Allied troops in Austria (comparable, said Figl, to "four elephants in a row boat"), but no accord had been announced by January. Neither were any steps taken toward the withdrawal of the Allied Council or the conclusion of a peace treaty. Such advances depended in part upon the adjustment of various frontier disputes, e.g. Yugoslav claims to southern Carinthia and Styria, temporarily occupied by Tito's Partisans in May, and Austrian hopes (formally expressed to the Allied Council in mid-November) of recovering from Italy the South Tyrol.

Austria's domestic political prospects depended upon the duration of the coalition and an avoidance of a repetition of the tragic cleavage of the early 1930's between Social Democratic workers and clerical-conservative peasants and property owners. Austria's economic future depended upon trade relations with her neighbors and upon the progress of reconstruction throughout Danubia and Balkania. The crucial decisions shaping the Austrian future remained to be made not in Vienna but in Washington, London, and Moscow.

See GERMANY, HUNGARY, GREAT BRITAIN, UNITED STATES, UNION OF SOVIET SOCIALIST REPUBLICS, UNITED NATIONS.

FREDERICK L. SCHUMAN.

AUTOMOTIVE SAFETY FOUNDATION. A philanthropic organization supported by annual contributions from more than 200 companies in the motor vehicle, parts and accessory manufacturing, rubber, petroleum, financing, and cement industries. Organized in 1937 and expanded in 1942, the Foundation makes grants of funds and staff services to a wide range of national organizations active in the program for safer and more efficient highway transportation. Chairman: Paul G. Hoffman. President: Pyke Johnson. Vice-Presidents: Norman Damon and G. Donald Kennedy. Headquarters: Tower Building, Washington 5, D. C.

BADMINTON. The badminton bird that fell an early captive to wartime restrictions did not obtain its freedom early enough last year to permit major competition and this sport was confined largely to backyard and clubhouse play. The only event of notice held was the Eastern doubles championship in New York, where Frank Williamson and Frank Janensky of New Rochelle won the men's title. Miss Helen Gibson of Westport, Conn., and Miss Mary Schlemm of Boston annexed the women's final and Miss Gibson and Lee Gustavson combined for the mixed doubles crown.

THOMAS V. HANEY.

BAKER ISLAND. An island in the Pacific (just north of the equator; 176°31'W.) which was discovered by Michael Baker, of New Bedford, Mass., in 1832. It has been formally considered an American possession since 1935 when colonized by students of a Hawaiian boys' school. The island is less than a mile in diameter. By an Executive Order issued May 13, 1936, the island was placed under the jurisdiction of the U.S. Dept. of the Interior. Its strategic importance lies in its position between Hawaii and Pago Pago, American Samoa, and in its use as a refueling station on the route between Hawaii and New Zealand. Early in 1942 U.S.

armed forces were withdrawn but in the fall of 1943 they reoccupied the island without opposition and built a radio and aerological station.

CHARLES F. REID.

BALTIC STATES. The three states, Estonia, Latvia, and Lithuania, which separately proclaimed independence from Russia in 1918, were reannexed by the Soviet Union in 1940 in the guise of constituent republics. Occupied by German forces in 1941, they were ruled by Reich Commissioners until their liberation in the fall of 1944. For the governmental setup in each country prior to 1944, see *YEAR BOOK* for 1943, pp. 189, 322, and 341. The latest reliable statistics are given in the article on each country in the *YEAR BOOK* for 1941. For the reintegration of the three states into the framework of the Soviet Union, and extension of their state rights, see the *YEAR BOOK* for 1944, pp. 58-59.

Events, 1945. Developments in the Baltic States, in 1945, remained for the most part shrouded behind an impenetrable veil of censorship imposed by the Soviet authorities. No foreign correspondents were admitted to those parts, and the scant information available from Soviet sources does not add up to a comprehensive picture of life in the reconstituted Baltic Soviet republics. As a result, most of the news concerning the Baltic countries in the past year dealt with their international status rather than with internal events, and referred to them as a group rather than as individual states.

Recognition Still Withheld. The salient fact of an otherwise highly confused situation was that both the United States and Great Britain continued to withhold formal recognition of the Baltic countries' incorporation into the Soviet Union, and that Washington at least continued to maintain diplomatic relations with legations whose governments long ago had ceased to exist for all practical purposes. In August it was reported that the State Department for the time being had shelved all further consideration of what to do with this embarrassing problem, leaving it to be solved by the Council of Foreign Ministers at the eventual peace conference.

The Soviet Government, while it did not press the issue in the diplomatic field, made several indirect bids for at least *de facto* recognition of its claim to represent the Baltic nations as component parts of the U.S.S.R.

The first such bid was made prior to the San Francisco Conference of April, 1945. In the organizational discussions, Russia endeavored to have the three Baltic republics, as well as the Ukraine and White Russia, seated at the conference, but was finally dissuaded on the plea that to raise the Baltic question at that time would cause embarrassment to everyone.

Next, at the International Conference of Cooperatives in London, on Sept. 12, J. L. Rone, Latvian member of the nine-man delegation sent by the Soviet Union, introduced a motion that Latvia, Estonia, and Lithuania should be recognized by the Conference as "independent national republics and therefore eligible to full membership in the International Cooperative Alliance." Mr. Rone declared, in support of his motion, that under the Soviet Constitution the three Baltic States were independent republics having the right to establish diplomatic relations with foreign powers and to be independent members in international organizations. In spite of considerable opposition, the resolution presented by Mr. Rone eventually was passed by the Conference, thus giving the Soviet

Union the first international recognition in this delicate question.

The issue again was brought up in the course of the inter-Allied conferences at which the indictment against the principal Nazi war criminals was drawn up (cf. *GERMANY*). In the text of the indictment finally agreed upon, the Baltic countries were referred to as "Soviet Socialist Republics." This designation caused inquiries as to whether the American and British signatures on the document constituted an indirect recognition of the Soviet claim by the governments of the United States and Great Britain.

Thereupon Supreme Court Justice Robert H. Jackson, the chief American prosecutor, in a letter to his British, Russian, and French colleagues wrote on Oct. 6: "In the indictment of German war criminals signed today, reference is made to Estonia, Latvia, Lithuania and certain other territories as being within the area of the U.S.S.R. This language is proposed by Russia and is accepted to avoid delay which would have been occasioned by the insistence on an alteration in the text. The indictment is signed subject to this reservation and understanding: I have no authority either to admit or to challenge, on behalf of the United States, the Soviet claims to sovereignty over such territories. Nothing, therefore, in this indictment is to be construed as a recognition by the United States of such sovereignty or as indicating any attitude, either on the part of the United States or on the part of the undersigned, toward any claim to redistribution of such sovereignty." Less explicitly, but no less clearly, a British Foreign Office spokesman indicated on Oct. 19 that the attitude of his government in the matter was the same as that set forth by Justice Jackson.

The Refugee Problem. One of the most puzzling problems resulting from the unsettled international status of the Baltic countries was still unsolved by the end of the year: no one apparently knew what to do with the more than 200,000 refugees or "displaced persons," whom the Russian and German armies had driven from their homesteads in Estonia, Latvia and Lithuania.

In mid-October—that is, at a time when some 80 percent of all displaced persons in the American, British, and French zones of occupation in Germany had been sent on their way home—it was officially estimated that the Allies still had on their hands some 21,000 Estonians, 47,000 Lithuanians, and 61,000 Latvians. In addition, Sweden listed 30,000 Baltic refugees, and there were many more thousands scattered throughout the rest of Europe.

Virtually all the 129,000 Balts in the Western Allies' zones of occupation were classed as "probably not repatriable," because of their anti-Soviet tendencies, and some 20,000 of them were described as "violently anti-Russian and pro-Nazi." This state of affairs caused grave concern at General Dwight D. Eisenhower's headquarters, and one officer with wide experience in the handling of displaced persons told a New York Times correspondent on Oct. 14: "In their camps they have organized a secret police run on Gestapo lines, and they are discouraging those Balts who really wish to return home." However, because of the United States' policy of non-recognition, American officials were reluctant to compel any Baltic citizen to return home. Sweden offered in June to repatriate free of charge all those Balts in the country who were prepared to go back.

Economic Reconstruction. By Soviet account, the economic rehabilitation of the sadly devastated

Baltic countries made great progress in 1945. In particular, the Soviet press devoted a great deal of attention to the development of the Estonian shale industry, whose output not only provides liquid fuel for the factories, power stations, and homes of Estonia but is also used for the production of gas for the great industrial city of Leningrad. According to an article in the Moscow *Pravda* of July 21, by the Premier of Soviet Estonia, Arnold Veimer, the country's shale mines are expected to better the 1941 production by the end of 1945. New shafts, providing work for 40,000 miners, are to be sunk in the next three years.

In all three countries, the redistribution of land, which had been initiated immediately after the entry of the Red Army, was brought to a conclusion. Large estates, especially those belonging to the "Baltic barons," were divided up among poor or landless farmers. There were some indications that this land reform was not proceeding smoothly everywhere, for on March 15, *Pravda* called for a "decisive attack on Kulak elements" in the Latvian S.S.R. The paper also complained that the returning Communist Party organizations were not doing enough to offset the "German Fascist usurpers and their helpers, the Latvian German Nationalists," who had "poisoned the consciousness of the workers of Latvia with false propaganda."

Decorations. In September it was announced in Moscow that 350 men and women guerrillas of the Lithuanian Soviet Republic had received decorations for gallantry and valor in battles against the German invaders. The title of "Hero of the Soviet Union," one of the top awards in the U.S.S.R., was conferred on two Lithuanian citizens.

JOACHIM JOESTEN.

BANKS AND BANKING. The chief role of the banking system in the national economy during 1945 was to absorb additional huge amounts of Government securities, thereby assuring the success of new Treasury financing. As in the previous war years, the increase in Government security holdings of the banks expanded deposits correspondingly, and inflated the nation's money supply to new peak totals.

The increase in commercial bank deposits lifted member bank reserve requirements. Expansion of currency circulation made inroads into bank reserves at the same time. The Federal Reserve banks provided additional reserves by expanding their portfolios of Government securities. In this way, a basis was provided for the further expansion of the nation's credit structure. The persistent increase in purchasing power increased the danger of a runaway price rise, since supplies of consumer goods remained quite limited, so that

price ceilings were kept largely intact despite the end of the war.

A keen demand for Government securities by the banking system produced a strong market for Treasury obligations, despite heavy new financing by the Government during the year. The Treasury contributed to the strength of the government bond market by issuing short-term obligations freely. Banks seeking to obtain higher rates of return had to bid in the open market for the relatively limited amounts of longer-term issues available, thereby raising their quotations.

Commercial Banking. Commercial banks expanded their holdings of Government securities by about \$10,000,000,000 during 1945, which compared with net purchases of \$17,716,000,000 during the preceding year. The increase in commercial bank holdings of Government securities was equivalent to about 20 percent of the growth in the interest-bearing national debt of the United States for the year. If increases in Government security holdings by the Federal Reserve banks, mutual savings banks, and the Postal Savings System are taken into account, the banking system as a whole is found to have played even a more important role in Government financing. Between Dec. 31, 1941, and Sept. 30, 1945, approximately the period of United States participation in World War II, the banking system absorbed 46 percent of the increase in the direct and guaranteed debt of the Federal Government, as can be seen from the following recapitulation:

OWNERSHIP OF UNITED STATES GOVERNMENT DEBT

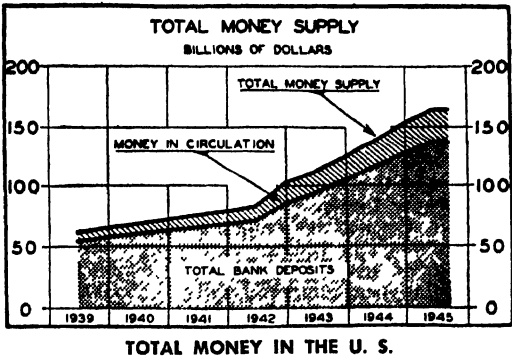
[Estimates, in billions of dollars]

	Outstanding		
	Sept. 30, 1945	Dec. 31, 1941	Increase
Federal Reserve Banks	23.3	2.3	21.0
Commercial banks	83.5	21.8	61.7
Mutual savings banks	10.0	3.7	6.3
Postal Savings System	2.8	1.3	1.5
Total banking system	119.6	29.0	90.6
Individuals	58.5	13.5	45.0
Corporations and associations excluding banks and insurance companies	30.0	4.3	25.7
Insurance companies	23.2	8.2	15.0
State and local governments	5.0	0.5	4.5
U. S. Government agencies and trust funds	23.8	8.2	15.6
Total nonbank investors	140.5	34.7	105.8
Total interest-bearing direct and guaranteed debt	200.2	63.8	136.4

Bank loans and investments other than in Government securities showed only minor changes during the year. With the end of the war, loans for war

TABLE 1—INVESTMENTS, LOANS, AND DEPOSITS OF REPORTING MEMBER BANKS IN 101 LEADING CITIES
(Monthly data are averages of weekly figures. In millions of dollars)

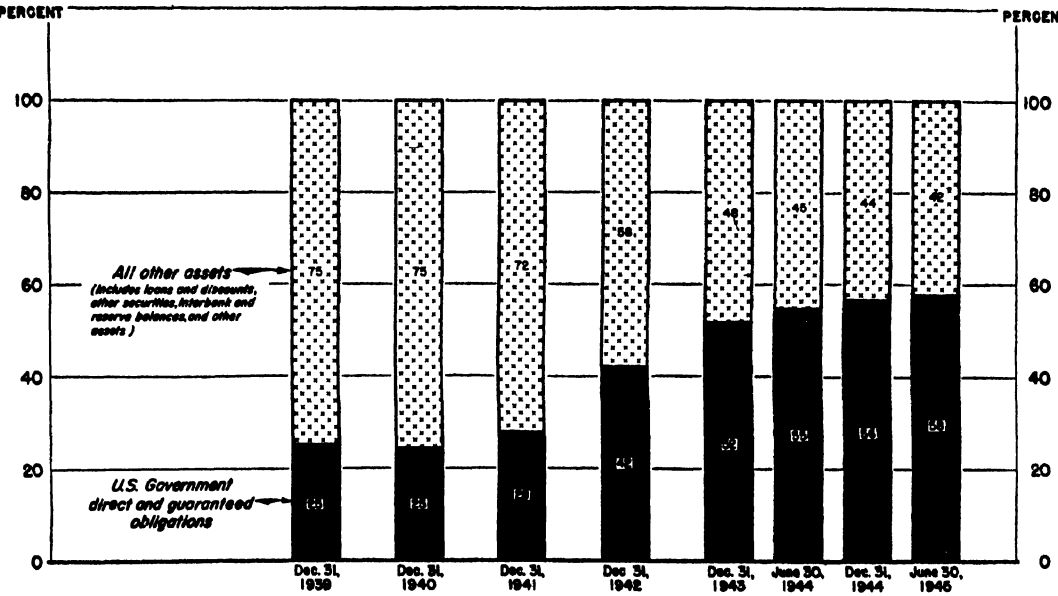
Months of 1946	U.S. Government Obligations	Other Securities	Commercial, Industrial and Agricultural Loans	Loans to Brokers and Dealers in Securities	Other Loans for Purchase or Carrying of Securities	All Other Loans	Demand Deposits Adjusted	Time Deposits
January	44,345	2,889	6,405	1,958	1,593	2,436	35,506	7,802
February	44,074	2,954	6,320	1,754	1,283	2,411	36,493	7,980
March	43,779	2,983	6,157	1,651	1,146	2,396	37,429	8,150
April	43,152	3,080	5,989	1,636	1,001	2,413	38,231	8,257
May	42,837	3,033	5,818	2,102	958	2,537	39,886	8,418
June	44,962	3,113	5,876	2,534	1,864	2,574	38,854	8,532
July	47,258	3,163	5,925	2,508	2,631	2,609	36,619	8,658
August	46,674	3,319	5,944	2,263	2,200	2,614	37,553	8,904
September	45,555	3,349	6,096	2,346	1,788	2,631	38,748	9,122
October	45,264	3,286	6,267	2,121	1,406	2,644	39,331	9,238
November	45,373	3,239	6,669	2,225	1,445	2,705	39,751	9,335
December	48,710	3,296	7,148	2,785	2,994	2,899	37,591	9,343



purposes declined, while some increase was reported in loans and applications for loans for ordinary commercial and consumption purposes. Owing to the very strong cash position of business, however, demands for commercial credit were necessarily limited. Bank loans for war purposes, which reached a peak of \$3,500,000,000 at the end of 1943, declined moderately during 1944 and rapidly in the latter part of 1945. This was true particularly of Regulation V loans guaranteed by

compared with \$355,000,000 in the same period of 1944. Prevailing business prosperity and higher security prices increased realized profits on investments and recoveries, while losses and charge-offs were reduced. Though income taxes were higher, the net profits of member banks were \$391,000,000 for the first six months of 1945, as compared with \$314,000,000 for the same period of 1944.

The higher level of bank earnings received some attention from regulatory authorities and in Congress. It was asked whether such earnings were becoming excessive in view of the fact that the chief function of the commercial banking system had become the monetization of a large part of the national debt, rather than making loans to industry, commerce, and agriculture with a considerable degree of risk. Bankers pointed out that they hope eventually to make loans and corporate investments in large volume again, and that such commitments would again cause losses and charge-offs, as in the past, while security profits and recoveries would taper off. They also stressed the point that cash dividends declared by member banks had risen but slightly, amounting to \$116,000,000 in the first half of 1945, compared with \$108,000,000 in the same period of 1944. Larger earnings are thus being used to build up the capi-



the Government. A considerable part of the loans granted by banks during 1945 consisted of term loans to larger enterprises, many of them to refund outstanding bond issues.

Changes in bank investments, loans and deposits from month to month during 1945 are shown in Table 1.

Acquisition of additional Government securities by the banks, many of intermediate term, tended to increase bank earnings. During the first six months of 1945, gross earnings of member banks of the Federal Reserve System reached \$1,016,000,000, as compared with \$901,000,000 in the corresponding period of 1944. Virtually all of this increase consisted of interest received on Government obligations. Expenses rose, chiefly because of higher wages and salaries, but net current earnings for the first half of 1945 were \$415,000,000, as

tal resources of the banks, which is regarded as highly desirable in view of the enormous increase in their deposits and the likelihood that more business loans involving risk will be made in the future. Critics of the high level of bank earnings suggested the sale to the banks of special issues of Government securities with a lower coupon rate or higher taxation of bank earnings as a solution.

Banks increased their capital during 1945 not only through the reinvestment of earnings, but also, in many instances, by the sale of new shares. A number of banks distributed stock dividends, by means of which part of the surplus account was capitalized and distributed to stockholders either in the form of new shares or through an increase in the par value of outstanding shares. However, the expansion of deposits generally outdistanced the increase in capital, so that the ratio of capital

funds to deposits declined further to a new low record.

Bank Legislation. Congress passed a series of amendments to the Federal Reserve Act to head off the possibility that the ratio of gold certificate holdings to deposit and note liabilities of the twelve Federal Reserve banks would decline below the ratios originally inserted in the law. At the same time, other changes were made in monetary legislation to win support for the bill from more conservative elements in Congress. The amendments, approved June 12, 1945, reduced the reserve requirements of Federal Reserve banks against their note and deposit liabilities to 25 percent, and only gold certificates could be counted as reserves by these institutions. The authority previously given temporarily to the Federal Reserve banks to pledge as collateral for Federal Reserve notes outstanding direct obligations of the United States Government was extended indefinitely. The Thomas amendment of May 12, 1933 was amended to terminate authorization for the issuance of \$3,000,000,000 of greenbacks, a power that had never been used. The authority granted the Federal Reserve banks to issue Federal Reserve bank notes, which have no gold certificate cover, as distinct from Federal Reserve notes, was also terminated. The issue of Federal Reserve bank notes had been authorized by Congress during the banking crisis of March, 1933.

Other important banking legislation enacted during 1945 related to international finance. The President signed on July 31, 1945 the Export-Import Bank Act of 1945, expanding the lending authority of that institution. This law increased the capital of the Export-Import Bank to \$1,000,000,000, and the institution was authorized to make loans and incur guarantees in an aggregate amount of \$3,500,000,000, or three and one-half times its authorized capital. A number of credits for foreign governments were arranged following the passage of this law. The bank obtains funds over and above its capital through the sale of notes to the Treasury.

The United States led the way in ratifying the Bretton Woods Agreements when the President signed, on July 31, the Bretton Woods Agreements Act, which accepted membership for the United States in the International Monetary Fund and the International Bank for Reconstruction and Development. It was provided in the law that the Governor of the International Monetary Fund appointed by the President would also serve as Governor of the International Bank, a step that was expected to assure that nations needing longer-term credits would be directed to the Bank, so that they would not freeze the resources of the International Monetary Fund. With this same end in view, the act set up a National Advisory Council on international monetary and financial problems, which was to consist of the Secretary of the Treasury as Chairman, the Secretary of State, the Secretary of Commerce, the Chairman of the Board of Governors of the Federal Reserve System and the Chairman of the Board of Trustees of the Export-Import Bank. This Council is required to recommend general policy directives for the guidance of the representatives of the United States on the Fund and the Bank, and to advise on major problems arising in the administration of these institutions. This legislation drastically amended the Johnson Act of 1934, which prohibited loans to foreign governments in default on obligations due the United States Government, by exempting foreign governments which hold membership in the Fund and the Bank.

The Green Act authorizing sales of Treasury silver to industry was allowed to lapse at the end of 1945, despite urgent demand for this metal because of inability to effect purchases abroad for domestic industrial requirements. The silver bloc in Congress sought an amendment to bar sales below a price of \$1.29 per ounce, which compared with 71.11 cents per fine ounce at which silver was sold by the Treasury until Dec. 31, 1945.

The Money Supply. Although the war came to an end war, the nation's money supply increased almost as much in 1945 as in the preceding years. Currency in circulation increased \$3,208,000,000 during the year, compared with \$4,858,000,000 in 1944. Demand deposits in banks rose by \$8,970,000,000 compared with \$6,127,000,000 for the year before. The annual rate of turnover of demand deposits of banks in 100 leading cities outside of New York declined from 17.3 in 1944 to 16.1 in 1945. The annual velocity of demand deposits of New York City banks increased from 22.4 in 1944 to 24.2 in 1945.

Changes in ownership of bank demand deposits between July 31, 1944 and July 31, 1945 were as follows:

CHANGES IN OWNERSHIP OF DEMAND DEPOSITS
(In billions of dollars)

	July 1944	July 1945	Increase Dollar Amount	Per- centage
Domestic business	37.6	42.4	4.8	13
Personal	18.4	23.0	4.6	25
All others.....	3.6	4.2	.6	17
	59.6	69.6	10.0	17

The end of the war did not bring about an immediate halt in the expansion of currency in circulation. The desire to keep more cash on hand during the period of transition, uncertainties, higher tax payments, inability to obtain many consumer goods, and population shifts incident to the end of the war tended to increase the volume of currency in circulation. The expansion of currency from month to month during 1945 is shown in Table 2.

Federal Reserve Policy. Federal Reserve banks bought more than \$5,000,000,000 of United States Government securities in 1945, to offset the further expansion of currency in circulation and to provide member banks with additional reserves, to enable them to absorb additional Treasury obligations. Excess reserves of member banks of the Federal Reserve System were thus kept above the \$1,000,000,000 level, in accordance with the policy pursued during the war period. The bulk of the Government securities acquired by the Reserve institutions consisted of certificates of indebtedness. On Jan. 2, 1946, reflecting huge open market purchases during the war, the twelve Federal Reserve banks held \$24,091,000,000 of U.S. Government securities, of which \$21,601,000,000 consisted of Treasury bills and certificates.

The chief offset to Government security purchases by the Federal Reserve banks during 1945 was an increase of \$2,892,000,000 in Federal Reserve notes outstanding. A second offset was an increase of \$1,849,000,000 in deposits of the Federal Reserve banks. Gold certificate holdings of the twelve Federal Reserve banks declined by \$582,000,000 during the year, reflecting moderate losses of gold to Latin American and European neutral nations during the last phase of the war era.

With the end of the war, the task of the Federal Reserve System changes in character. Any

TABLE 2—PAPER CURRENCY AND COIN IN CIRCULATION
(In millions of dollars)

1946 End of month	Total in Circula- tion	Coin and Small Denomination Currency							Large Denomination Currency							Unas- sorted
		Total	Coin	\$1	\$2	\$5	\$10	\$20	Total	\$50	\$100	\$500	\$1,000	\$5,000	\$10,000	
Jan.....	25,290	17,456	1,150	950	77	2,102	5,936	7,242	7,837	2,022	4,228	566	990	10	21	3
Feb.....	25,751	17,778	1,158	953	75	2,135	6,076	7,381	7,974	2,059	4,317	571	994	10	24	1
Mar.....	25,899	18,000	1,170	954	73	2,132	6,132	7,539	7,900	2,088	4,266	550	965	9	23	1
Apr.....	26,189	18,353	1,180	957	73	2,151	6,238	7,754	7,837	2,128	4,210	527	932	9	33	1
May.....	26,528	18,715	1,196	972	73	2,186	6,377	7,911	7,814	2,159	4,192	513	909	8	33	1
June.....	26,746	19,183	1,205	981	73	2,215	6,515	8,193	7,565	2,132	4,044	483	868	8	31	2
July.....	27,108	19,599	1,223	995	73	2,250	6,659	8,400	7,511	2,139	4,013	472	847	8	32	2
Aug.....	27,685	20,141	1,236	1,003	73	2,301	6,826	8,700	7,546	2,180	4,038	466	832	8	22	2
Sept.....	27,826	20,235	1,243	1,001	72	2,288	6,815	8,816	7,592	2,204	4,071	464	825	8	21	2
Oct.....	28,049	20,381	1,252	1,000	71	2,274	6,779	9,004	7,671	2,243	4,123	461	816	7	21	2
Nov.....	28,211	20,500	1,263	1,009	71	2,279	6,783	9,095	7,713	2,264	4,154	457	811	7	20	2
Dec.....	28,515	20,683	1,274	1,039	73	2,313	6,782	9,201	7,834	2,327	4,220	454	801	7	24	2

decline in currency circulation or inflow of gold would lift excess reserves, thus permitting a reversal of open market policy and a contraction in the Government security portfolio of the Reserve banks.

The Federal Reserve System intensified its efforts to bring additional commercial banks into the par clearance system. Under this system, Federal Reserve banks collect out-of-town checks without charge for banks which do not deduct exchange charges on checks drawn upon them. The Board of Governors of the Federal Reserve System issued a memorandum to member banks stating that, after Aug. 1, 1945, member banks could not absorb for their customers exchange charges deducted from checks drawn on non-par clearing banks deposited by these customers in their bank accounts,

complicated it. On Feb. 5, margin requirements for extensions of credit on listed securities by brokers, dealers, and banks were raised from 40 to 50 percent. On July 5, margin requirements were raised further from 50 to 75 percent, the highest level ever reached. It was recognized, however, that the expansion of the money supply made this action of limited effectiveness, for numerous speculators and investors were able to pay cash for the securities they wanted to purchase.

JULES I. BOGEN.

BAPTISTS. A religious group, probably evolved from the Anabaptist movement of the 16th century, which adopted the principle that immersion is essential to valid baptism. The first Baptist churches were established in Amsterdam in 1608, in London in 1611, and in America, probably at Providence, R.I., in 1639. There are a score or more denominations in the United States which use the name *Baptist*, the largest of which are treated below.

Northern Baptist Convention. This body of the Baptist denomination was composed in 1945 of 36 conventions in 33 States, the District of Columbia, and Puerto Rico. The annual meeting for 1944 was held in Atlantic City, N. J. The 1945 annual meeting was omitted, owing to the war emergency. The next annual meeting will be held in Grand Rapids, Mich., May 21-26, 1946.

The leading denominational papers are: *Baptist Observer* (Indianapolis); *Baptist Record* (Pella, Ia.); *Missions* (New York); and *Watchman-Examiner* (New York).

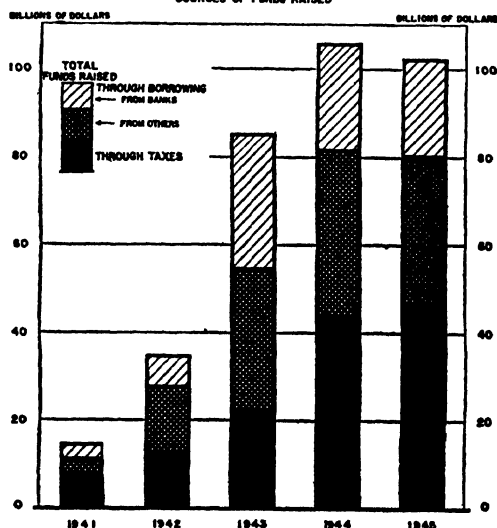
The foreign mission field includes Assam, Burma, South India, Bengal-Orissa, South China, East China, West China, Japan, Belgian Congo, and the Philippine Islands. The work of the Convention covers domestic, city, and foreign missions; higher education, social service, Sunday schools, and pensions for clergy.

The total membership of the Northern Baptist Convention for 1944-1945 was 1,570,446, distributed among 7,314 churches, mostly above the Mason and Dixon Line. The total amount of funds received and expended by the churches and their agencies, as of Apr. 30, 1945, was \$20,470,926 for church operating expenses and \$6,313,350 for missions, education, and philanthropy.

The officers for 1945 were: Mrs. Leslie E. Swain, President; Rev. J. B. Smith, and C. J. Howell, Vice Presidents; Rev. J. C. Hazen, Corresponding Secretary; Rev. C. M. Gallup, Recording Secretary, and H. J. Manson, Treasurer.

Headquarters of the General Council, the executive body to which is entrusted the work of the Convention between annual meetings, are at 152 Madison Avenue, New York N. Y.

Southern Baptist Convention. This body of the Baptist denomination was formed in 1845, when Southern Baptists withdrew from the national

TREASURY WAR FINANCING
SOURCES OF FUNDS RAISED

WHERE THE WAR MONEY CAME FROM

except where such charges do not exceed \$2 for any one depositor in a month. Absorption of exchange charges by banks for their customers was held to violate the Federal Reserve Act's prohibition of interest payments by member banks on demand deposits. By the end of the year, only about 2,000 commercial banks, chiefly of small size, remained outside the par clearance system. Every commercial bank in 24 States, and the District of Columbia, had joined the par clearance plan.

The Board of Governors of the Federal Reserve System took cognizance on two occasions during the year of the persistent rise in stock prices, and the growing security market speculation that ac-

organization on account of the slavery issue and also for the better administration of the work of the Convention. It comprises 20 State conventions functioning in the Southern and Southwestern States and extending through New Mexico, Arizona, and California.

The Centennial celebration of the organization was held in 1945 but plans for a centennial convention were cancelled because of the war. Features of the Centennial Crusade were evangelism, enlistment, education, rehabilitation, stewardship, and benevolence.

Officers for 1945 were: The Honorable Pat M. Neff, Waco, Texas, President; Rev. Louie D. Newton, and Rev. Wm. H. Williams, Vice Presidents, the Rev. Hight C. Moore and Mr. J. Henry Burnett, Recording Secretaries; the Rev. Austin Crouch, Executive Secretary (retired during 1945), and the Rev. J. E. Dillard, Secretary of Promotion. Executive Committee offices are at 127 Ninth Avenue, North, Nashville 3, Tenn.

The statistics for 1944 were as follows:

Churches (congregations)	25,965
Ordained ministers	24,011
Church members	5,667,926
Sunday Schools	24,626
Enrolled in Sunday Schools	3,380,630
Enrolled in Baptist Training Unions	759,885
Enrolled in Missionary Unions	719,186
Value of church property	\$259,740,715
Gifts to local work of churches	\$ 59,295,901
Gifts to missions and benevolences	\$ 17,303,519
Total contributions	\$ 76,599,420
Schools and colleges fostered	65
Students enrolled—regular session	28,707
School property	\$ 47,379,498
Endowment funds	\$ 30,230,845
Property of 18 Children's Homes	\$ 7,946,953
Property of 21 hospitals	\$ 19,364,058

National Baptist Convention of America. The 65th annual session was held in St. Stephen's Baptist Church, Kansas City, Mo., Sept. 5-9, 1945. Meeting jointly with the parent body were the Woman's Auxiliary Convention, the Baptist Brotherhood Union and the Junior Women.

The Convention authorized the secretary of its Foreign Mission Board and the president of the Woman's Auxiliary Convention to visit the foreign fields, including Cuba, Puerto Rico, Liberia and West Coast Africa.

The Convention went on record as favoring a permanent FEPC, the repeal of the Poll Tax, passage of an Anti-Lynch Bill, Full Employment Legislation, and a vigorous postwar rehabilitation program.

The statistician's report showed that there were 48 state conventions, 700 district and county associations represented in this body, by messenger and by enrollment, and that the numerical strength of the present convention was 2,365,821. Cash totaling \$46,000 was reported from the Kansas City session. \$10,000 was appropriated to foreign missions, \$4,000 to home missions, \$6,000 to education, \$1,000 to benevolence work, and \$800 to the editorial work of the *Union-Review*.

The following major officers were elected: Rev. G. L. Prince, President; Rev. G. C. Daniels, Secretary; Rev. A. A. Lucas, Treasurer; Rev. A. L. Roach, Field Secretary; Rev. Wm. Grimbale, Corresponding Secretary; Rev. L. B. Tolson, Statistician; Rev. M. C. Allen, Auditor.

The 1946 session of the Convention will be held with the Mt. Zion Baptist Church, Columbia, S. C., in September, 1946. The National Baptist Publishing Board, Henry A. Boyd, Secretary, 523 2nd Ave. North, Nashville, Tenn., is the acceptable headquarters.

BASEBALL. Followers of baseball who had watched our national pastime stagger through three War years viewed the season of 1945 with a feeling of apprehension for even the most optimistic leaders feared that it couldn't be done again in the face of increased travel restrictions and the continued departure of the big-name players for the services.

Yet when the curtain fell on the last game in October many of the fans were left limp in the wake of two torrid pennant races that drew a record total of more than 11,000,000 admissions, and a seven-game world series that surpassed all previous figures with \$1,592,454 in receipts.

Following the collapse of Germany in May, the game got an amber light and when Japan capitulated in August all sports received the green signal. For the most part, the quality of baseball was far below par, but fans obtained some measure of reward when the big stars of other years, such as Bob Feller and Hank Greenberg, began to come back from the wars.

The game provided news all the year round. The first big story broke as early as Jan. 26, when Col. Larry MacPhail, who had retired as head of the Dodgers in 1942 to accept an Army commission, grabbed the headlines with an announcement that he was heading a three-man syndicate that had just purchased the rich New York Yankee baseball empire. MacPhail, Dan Topping and Del Webb bought the Bronx Bombers and all their farm holdings from the estate of the late Col. Jacob Ruppert for \$2,800,000.

On April 24, the sixteen major league club owners came up with another surprise package in the announcement that they had chosen Albert B. (Happy) Chandler, then United States Senator from Kentucky, as commissioner to succeed Kenesaw Mountain Landis, who until his death late in 1944, had ruled baseball with an iron hand ever since 1921.

Meanwhile pennant races that were to reach fever pitch before October had started after the major leaguers had spent their third year of enforced spring training in northern camps. A number of veterans and untried new players were enlisted to relieve the manpower situation and the quality of play was indeed poor. However, the fans came out in force. At the close of the regular campaign, the Dodgers, Giants and Cubs in the National League and the Yankees and Tigers in the American showed attendance figures that soared over the million mark. The Tigers led with 1,280,321, while the two circuits, attracting 11,375,185, set an all-time high, topping their 1944 total by 2,400,000.

The St. Louis Cardinals were picked to repeat in the National League, but the Redbirds, finally war-riddled and brought down to the level of their opponents, had their three-year reign ended when Charley Grimm's Chicago Cubs came crashing through. It was another surprising MacPhail maneuver that helped the men of Grimm, for the new Yank owner, having obtained American League waivers on Hank Borowy, sold the New York pitching ace to the Cubs for \$100,000. This astounding move provided just the lift Chicago needed, for Hank went out to win eleven games, against two defeats, and on the next to the last day of the regular campaign the Cubs clinched the pennant.

An unusually hot race marked the American League play and at times six clubs, including the feared Yanks, were in the thick of the fight. But on the last day, Steve O'Neill's Detroit Tigers, who had lost out in their final game of 1944, turned

back the Browns and finished a mere half game in front of the Washington Senators.

The return of Greenberg served to stimulate the Tigers and Big Hank brought the pennant to Detroit with a mighty home run on the last day of the regular season. Hank's power hitting and the pitching of Hal Newhouser, a 25-game winner, just about did the trick and they did it again in the world series.

The October classic presented a weird assortment of baseball and, although there were a few innings of brilliant feats, the boys for the most time appeared to be engaged in a comedy of errors. Numerous records for misplays were set, but the series did unfold the best-pitched contest in series history when Claude Passeau of the Cubs hurled a one-hitter. Only two Tigers reached first, one on a single, the other on a pass and neither advanced to second.

The scramble continued until the deciding seventh game, when Newhouser, making his third appearance in the series, triumphed over the Cubs by 9 to 3, to give the world championship to Detroit.

Additional surprises came in the wake of the big October show when it was announced that Billy Southworth, successful manager of the Cardinals, had been released to become manager of the Braves, and when the Dodgers signed Jackie Robinson of the Kansas City Monarchs for their Montreal farm, the first time a major league club ever had signed a Negro player. Indications were that other Negroes would follow the brilliant young shortstop into the big time.

Newhouser, one of the greatest hurlers of modern baseball, was chosen as the American League's most valuable player for the second straight season, while Phil Cavarretta of the Cubs won similar honors in the National circuit. Cavarretta captured his league's batting crown with an average of .355 while George Stimweiss, fleet-footed Yankee, paced the American with .309.

Louisville defeated the Newark Bears, 4 games to 2, in the little world series. Newark won the International League's Governors Cup play after finishing behind champion Montreal in the regular season. Milwaukee captured the American Association pennant, Atlanta was victor in the Southern Association, and Portland finished on top in the Pacific Coast League.

New York University carried off Metropolitan Conference laurels, Princeton paced the Eastern Intercollegiate League, and Michigan retained its championship of the Western Conference.

THOMAS V. HANEY.

BASKETBALL. The biggest sports scandal since baseball's "Black Sox" episode of 1919 rocked the game of basketball in January of last year when New York detectives, making an investigation of clothing thefts, unexpectedly uncovered the fact that Brooklyn College players had accepted \$1,000 in bribes to "throw" a contest with Akron University and had tentative plans to do likewise when they met St. Francis, their traditional borough rival.

When a suspect in the thefts, hoping to establish his innocence, blurted to police that he had done nothing more than accept a basketball bribe, he started a real uproar in collegiate circles. Brooklyn immediately expelled the offending players, New York made certain their collaborators were punished and cries for closer supervision of the college court game were heard all over the nation. Officials of most arenas where the big attractions are staged drove off known gamblers and made

sincere efforts to enforce that much neglected rule of "no betting allowed."

Despite the scandal, this country's leading winter sport, which survived many storms during the period of wartime travel restrictions and player shortages, continued its upward swing in popularity. New York's Madison Square Garden, under the guidance of the genial Ned Irish, again stole the spotlight with its colorful program of double-headers.

A rangy band of Oklahoma Aggies, led by the seven-foot Bob Kurland, earned the right to be called national collegiate kings by defeating DePaul University, 52-44, in a Red Cross benefit game that brought together the winner of the Garden invitation tourney and the National Collegiate Athletic Association champions.

The Aggies began their march to the throne when they subdued Arkansas, 68-41, while New York University was downing Ohio State, 70-65, in the N.C.A.A. semifinals. Then, with Kurland scoring 22 points, the Westerners turned back N.Y.U., 49-45, in the last round.

DePaul, paced by All-American George Mikan, won the invitation tourney by routing Bowling Green, 71-54, in the final round after crushing Rhode Island State, 97-53. The year's biggest Garden court crowd, 18,253 persons, saw the great Mikan tally 53 points to equal Rhode Island's total and set a new Garden record. Mikan then registered 34 markers in the deciding game with Bowling Green.

Paired against the Oklahoma Aggies in the benefit game that netted more than \$50,000 for the Red Cross, DePaul lost by 52-44 Kurland, with 14 points, and Cecil Hankins, with 20, proved too accurate for the Blue Demons, whose attack bogged down when Mikan was ruled out on personal fouls after 14 minutes of action.

Pennsylvania carried off the Eastern Intercollegiate League crown to end Dartmouth's 7-year reign and the Quakers added to their laurels by conquering Army, 61-52, the setback being the first in 28 starts for the Cadets, who compiled a record of 30 victories against that lone setback over a span of two seasons.

Other college champions in 1945 were: Western Conference, Iowa; Pacific (Southern), U.C.L.A.; Pacific (Northern), Washington State and Oregon, tied; Big Six, Iowa State; Big Seven, Utah; Southwest, Rice; Southern, North Carolina; Southeast, Kentucky; Ohio Conference, Akron; Mason-Dixon, American U.; Southwest Border, New Mexico, and Missouri Valley, Oklahoma Aggies.

The G2 Depot quintet won the championship of American forces stationed in the United Kingdom, while Bainbridge, Great Lakes and Mitchel Field were among the service leaders competing at home. The Phillips 66 Oilers of Bartlesville, Okla., kept their national A.A.U. men's crown and the Nashville, Tenn., Convacs won women's laurels. The Philadelphia Sphas retained American League honors and the Fort Wayne, Ind., Zollners annexed the world professional title.

THOMAS V. HANEY.

BATTLE MONUMENTS COMMISSION, American. A Commission created by Congress in 1923 to erect, or control the erection of, monuments to the American forces in Europe during World War I, and to maintain the American national cemeteries and memorials in Europe. Chairman: Gen. John J. Pershing.

BELGIAN CONGO. Belgium's only colony, located in central Africa and embracing a large part of the

basin of the Congo River. Area, 902,082 sq. mi. Capital, Léopoldville.

Government. The administration is under the general supervision of the Belgian Minister of Colonies, normally an appointee of the King, and is assisted by a Colonial Council. At the head of the actual administration is a Governor-General, assisted by a Vice-Governor, state inspectors, and six provincial governors. The provinces are in turn divided into districts and these are subdivided into administrative territories. The frame of government is thus centralized, hierarchical and with little place for native participation.

The Congo is saddled with a large debt, though not unwieldy in view of the Colony's expanding economy. In 1939 the figures were: consolidated debt, 3,992,980,029 francs and floating debt, 480,004,400 francs, in addition to 1,368,957,250 francs of guaranteed capital. In 1944 government receipts were 1,765,683,000 francs and expenditures were 1,601,405,000 francs.

Events, 1945. The end of the war obliged the Congo authorities to seek ways and means for readjusting the colony's economy to a peacetime basis. The impetus of wartime needs had caused an increased production of such items as copper, pitchblende (from which uranium is extracted), rubber and palm oil. At the same time, local industries were expanded or created to provide goods which could no longer be imported, such as textile manufactures.

During the latter part of the year the Sabena Company, a Belgian concern, reopened its air services between the Congo and the mother country. At the same time shipments of coffee and palm oil to Belgium were resumed by sea. A permanent peacetime air connection with the United States seemed assured when an examiner of the Civil Aeronautics Board in Washington recommended that Pan American Airways, which had operated a service from Miami to Léopoldville from September, 1941, to August, 1945, be granted the only American certificate to operate into the Congo from New York via the Azores.

A Belgian field hospital with a native medical staff operated on the Chindwin front in Burma, alongside the African divisions from the British colonies.

Characteristics of the Population. The native population on Jan. 1, 1944, was 10,486,291. Whites numbered 34,888, of which two-thirds were Belgians. Most of the natives are Bantu and Sudan Negroes, with a few Nilotic tribes in the northeast and some Pygmies scattered in the interior.

The Belgians point with pride to the number of schools available for the natives. Most of these schools are provided by Christian missions, though many are subsidized by the government. In 1943 there were 5,413 subsidized primary schools (293,099 pupils) and 53 subsidized secondary schools (3,691 pupils). Not subsidized were 194 primary schools (42,222 pupils), 8,669 rural schools (238,342 pupils), and 22 professional schools (1,288 pupils). In general, instruction in technical fields is emphasized rather than in social or broadly cultural studies.

The great mass of the natives is still pagan. The work of the Christian missions is carried on by some 4,000 missionaries (three-fourths of whom are Roman Catholics), without whose activities the government would have been compelled to engage far more widely in educational and welfare work than is now the case. Compared with adjacent colonies, the Belgian Congo has in recent years enjoyed a reputation as one of the most progressive

in health and sanitary measures. The Belgians proceed on the theory that a healthy native population is an economically efficient one.

The Economy of the Country. The Belgian Congo is, industrially speaking, one of the most advanced colonies in Black Africa. The country is rich in mineral resources, fertile soil and potential water power (only 7 per cent of the colony's potential water power—second largest in the world—is now utilized). The natives have shown themselves readily adaptable to work in mines, factories and offices. The Belgian régime has also been very friendly to the introduction of outside capital. As a result the production of the Congo's plantations, mines and textile mills has been highly profitable.

Production figures for 1943 are as follows: rubber, 12,000 metric tons; peanuts, 50,000 tons; cotton, 43,000 tons; palm oil, 120,000 tons; copper, 156,850 tons; gold, 15,138 kilograms; diamonds, 4,882,000 carats (world's leading producer by weight); tin, 23,967 tons; as well as important amounts of manganese, zinc and iron.

The colony's foreign trade, much of which passes through the port of Matadi on the lower Congo, in 1943 amounted to: exports, 2,289,475,009 francs; imports, 2,905,604,082 francs. The United States and the United Kingdom each took 1,500,000,000 francs' worth of Congo products. The United States also provided imports worth 980,646,000 francs. The return of peace was, however, expected to alter the direction of the Congo's trade relations.

The Congo River and its larger tributaries are navigable for varying distances. The Congo itself is broken at several points by cataracts, around which railroads have been built. Navigable rivers total more than 7,500 miles, railways 3,106 miles, and roads 55,000 miles. Before the war the Congo was served by several international airways and possessed an extensive internal network operated by the Sabena Company.

Ruanda-Urundi, Territory of. These two districts, formerly part of German East Africa, were assigned to Belgium as a B Mandate after World War I. The Territory has an area of 20,152 square miles and a population of 3,775,335—one of the most dense in Black Africa. The capital is Usumbura. In 1925 the Territory was joined administratively with the Belgian Congo and placed under the direction of a vice-governor. In 1941 there were 3,601 mission schools with 236,920 pupils. Cattle-raising is important. The chief exports are cotton, coffee, hides and tin.

ROBERT GALE WOOLBERT.

BELGIUM. A kingdom of Western Europe. Capital, Brussels. King, Leopold III, who was crowned Feb. 23, 1934; he was a German prisoner-of-war from May 27, 1940 to May 8, 1945. (For his present status, see below under **EVENTS**) Regent, Prince Charles, Leopold's younger brother, who took the oath on Sept. 21, 1944.

Area and Population. The area of Belgium, including the districts of Eupen and Malmédy, is 11,775 square miles. The estimated population on Jan. 1, 1942, was 8,257,392. The people are of two distinct races, the Flemings, of Germanic stock and the Walloons, of Celtic or Alpine racial origin. French and Flemish are official languages. Estimated populations of the chief cities on Dec. 31, 1938: Brussels and suburbs, 912,774; Antwerp, 273,317; Ghent, 162,858; Liège, 162,229. Living births per 1,000 inhabitants numbered 15.3 in 1939, 13.4 in 1940, 12.0 in 1941, 12.9 in 1942, and 14.7 in 1943; deaths, 13.8 in 1939, 16.1 in 1940, 14.5 in 1941, 14.6 in 1942 (including military),

and 13.4 in 1943 (including military). The infant mortality rate per 1,000 live births was 73 in 1939, 85 in 1940, 84 in 1941, 78 in 1942, 68 in 1943, and rose to 77 in 1944. The death rate per 1,000 was 15.7 in 1944.

Government. The Constitution of 1831, as amended in 1921, vested executive power in the King, acting through a Ministry responsible to Parliament. See YEAR BOOK for 1940, for the governmental system existing at the time of the German invasion of May 10, 1940. For the establishment and composition of the Belgian Government in Exile during the war see YEAR BOOK for 1944, p. 66-67.

Education and Religion. Previous to the war there were (Jan. 1, 1939) 1,222,164 pupils in 13,438 elementary schools, 86,279 students in 273 secondary schools, and 10,775 students in the four universities at Brussels, Louvain, Ghent, and Liège. Roman Catholics form a large majority of the inhabitants who profess a religious faith. There is full religious liberty.

Events, 1945. For liberated Belgium, 1945 was a year of many and severe crises. Like other nations freed from the German yoke, Belgium learned the hard way that liberation is not enough; that it is merely the first stage in a long and painful process of political, economic, and moral recovery.

Victim to the Last. The classic victim of unprovoked aggression, Belgium was not spared the final spasms of war. Nazi Germany's last fling at offensive action, the Ardennes offensive of December, 1944, hit her with full force, adding more death and destruction to the grievous total sustained before liberation.

By the end of January, the "bulge" which the returning Germans had driven into southeastern Belgium had been wiped out, and Belgian territory had once more been cleared of the invader, but in the rear lay scores of wrecked Ardennes cities—Houffalize, St. Vith, Laroche, Bastogne, and Malmédy in particular—and thousands of civilian dead or wounded.

Even more destructive than the re-invasion of about one-fifth of Belgium's soil was the sustained robot-bomb offensive which the Germans directed at the great Belgian port of Antwerp in the last months of the war. From October, 1944, through March, 1945, Antwerp was subjected to continuous bombardment, on a larger scale than even London, by robot bombs and rockets. More than 2,900 persons were killed in the city of 600,000, and some 57,000 houses were damaged beyond repair. Militarily, however, the bombardment was a complete failure. Only 5 percent of the Nazi missiles hit the port area, where 30,000 dockers kept unloading ships, regardless of the bombs. Thus Antwerp became truly the key to Allied victory, speeding more than 2,000,000 tons of supplies to the fighting lines. Liège also was hard hit by rockets and robot bombs, losing 27,000 houses in three months, and 1,045 killed.

Change of Government. Even before the military danger to Belgium had been removed completely, the political crisis which had been simmering since liberation (see 1945 Year Book) erupted again. Nation-wide dissatisfaction with Prime Minister Hubert Pierlot's handling of such matters as the purge of collaborationists, and the bid of the Resistance movement for a greater share in the administration, was enhanced by the sad state of economic affairs (see below).

Early in February the Pierlot Cabinet resigned after having grappled for four months with the problems of liberation. Prince Regent Charles's

choice then fell upon the dynamic Socialist leader Achille van Acker, author of a Belgian "Beveridge Plan," who had held the portfolio of Labor in the fallen Cabinet.

On Feb. 11 Premier van Acker formed his government, after overcoming the reluctance of the influential Catholic Party to enter a coalition including the Communists. The new Cabinet, comprising representatives of all four parties (Catholics, Liberals, Socialists and Communists) marked a decisive swing to the left, and a radical break with the old London group, of which only one member, Foreign Minister Paul-Henri Spaak, was retained. Conversely, the Resistance movement, to which van Acker himself belonged, was given increased representation.

The Constitutional Crisis. Hardly was the war won, and the political picture straightened out, when Belgium found herself enmeshed in a most serious constitutional crisis. It began the moment it became known, on May 8, that King Leopold III and his wife, Princess Rethy, had been freed from Nazi captivity near Salzburg, Austria.

Immediate and widespread opposition arose against the King's possible return to Belgium. It is important to emphasize that this movement, centered chiefly in the Socialist and Communist parties, and generally in the former Resistance, was not aimed at the institution of monarchy, or at the Saxe-Coburg dynasty *per se*; it was not an issue between monarchists and republicans, but between a headstrong, egocentric ruler, Leopold III, and his people. *L'affaire royale* never involved the King's brother, Charles, who had been installed as Regent in September, 1944, nor the heir apparent, the 15-year-old Prince Baudoin, both being truly popular in Belgium.

The objections raised by "The King's opposers" against Leopold personally were many and varied, the principal charges being that (a) his capitulation in May, 1940, was deliberate and premeditated; (b) that he had evinced, even before the war, pro-German and pro-Fascist sympathies; (c) that, contrary to his claims, he had not, under German rule, lived and behaved as a prisoner of war, since he twice visited Hitler in Berchtesgaden and even married again in captivity; (d) that he had been formally deposed by his Cabinet on May 30, 1940.

On May 10, Prince Charles, Premier van Acker, and other Belgian political personalities arrived by airplane at Villa Auhof, St. Wolfgang, Austria, where the King had been living "as a guest of the American Army" since his release from German captivity. The Premier later explained that his intention on this first of four flying visits to St. Wolfgang originally had been to take the King back to Brussels, but that he subsequently had changed his mind when he found that the events through which Leopold had lived had deeply affected his character; he hinted at a neurotic instability of mind which made the King unfit to govern.

Thus, when van Acker announced on his return to Brussels, on May 13, that the King would not be back for some time because of ill health, he was not really feigning "diplomatic illness," but was speaking the truth, though he did not specify at the time what ailed Leopold.

In the following weeks, however, it became amply clear that a majority of the population would not welcome Leopold back to the throne, even if he were in the best of health. One after another, the political parties in Parliament, with the single exception of the Catholics, went on record against a return of the King.

This widespread opposition notwithstanding, Leopold let it be known, in mid-June, that he had fully recovered and was prepared to resume his royal functions. In emphatic protest against this decision, Premier van Acker and his Cabinet on June 16 presented their resignations to the Prince Regent. A communiqué declared the Government could not "take responsibility for political events that inevitably will happen as soon as the King returns." This was taken to mean that there would be mass demonstrations and possibly grave disorders if the King, overriding the advice of the Cabinet, returned to Brussels.

Thus the crisis at last was out in the open. Public clamor for the King's abdication became more frequent and insistent. In the Walloon parts of the country, where Leopold was particularly unpopular because of his allegedly anti-French feelings, demonstrators shouted "Death to Leopold! Hang him!"

But the lonely exile at St. Wolfgang was not yet prepared to give up his throne. Even as the tendered resignations of the van Acker Government lay on the desk of the Regent, Leopold summoned various political leaders to his residence in an attempt to form a new Cabinet. Former Premier Paul van Zeeland, a Catholic, and Lieut. Gen. Ganshof van der Meersch, hero of the underground, were among those called by the King but both declined in view of the threatened complications at home. The powerful trade unions had made it clear by that time that they would call a general strike if Leopold returned.

Meanwhile, van Acker's Cabinet carried on, the Regent having in effect refused to accept its resignation, and on July 16 it was announced that the ministers would remain in office. The Premier declared that Leopold, though refusing to abdicate, had agreed not to return for the time being.

The King's stubborn fight for his throne thus ended in a provisional stalemate but it had the unwelcome effect of disrupting the national unity which van Acker had so laboriously cemented at the advent of his regime. Indeed, on July 17, the six representatives of the Catholic Party withdrew from the Cabinet in protest against the stand taken by the Premier and a majority of his ministers in the *affaire royale*. The Catholics then returned to the opposition in Parliament, leaving a virtual "popular front" regime in power.

Within a few hours of this split, the Chamber of Deputies voted by overwhelming majority to bar Leopold from returning to his throne without the consent of Parliament; a special act extending Prince Charles' regency for an indefinite period was passed by a vote of 98 to 6, with 32 members abstaining. The following day, July 18, the Senate ratified the action, though by a narrower margin: 77 votes were cast in favor of the measure, and 58 against it, five abstaining.

Thus the issue was closed to all practical purposes, but the heated debate in Parliament continued for a few more days. On July 20, Premier van Acker, in a two-hour address to the Chamber, substantiated most of the charges that previously had been levelled at Leopold. While refusing to consider the King a "traitor," van Acker found it intolerable for him to resume the throne, in view of his many past errors of judgment and his impaired health.

An even sterner indictment of the King was laid before the Chamber on July 24 by Foreign Minister Paul-Henri Spaak who charged Leopold with having been a defeatist in 1940 and also attacked the King's British military adviser at the time, Admiral

Keyes. M. Spaak introduced into the debate a hitherto unpublished letter written by Leopold on Jan. 25, 1941, in which the King severely criticised his ministers who had continued the fight in exile. "If Belgium survives today," declared M. Spaak, "it is because we disobeyed the King at that time. All those who carried out sabotage during the occupation, or worked against the Germans, likewise disobeyed the King." And he concluded: "Leopold no longer can be accepted as a symbol of unity."

On July 26 the Chamber closed the debate by a 95 to 68 vote in support of the Government. The long-drawn-out crisis thus ended in a draw. The King remained in Austria, to all practical purposes an exile, Prince Charles stayed as Regent, and the van Acker regime continued in office, minus its former right wing. Both factions left it up to the people to decide at the elections scheduled for March, 1946, whether or not Leopold should return to his throne. Toward the end of August it appeared that the King had resigned himself to a long exile; through a personal secretary, Prof. Jacques Pirenne, he applied for permission to enter Switzerland and take up residence there.

The King's application was granted by the Swiss Government, and on Sept. 29 Leopold and his suite crossed the border from Austria. Two days later the party arrived at Pregny, on the Lake of Geneva, where a villa had been prepared as future residence for the exiled monarch.

Soon, however, it became clear that if Leopold had abandoned his plans for an immediate return to Belgium, he had by no means accepted final defeat yet. For, even as the King arrived in Switzerland, a royal proclamation was released in Brussels by the semi-official Belgian News Agency in which Leopold once again defended his record under the Nazi occupation and made a new bid for his throne. Declaring that since his capitulation in May, 1940, he had "done nothing else" but resist the Germans, Leopold concluded his proclamation with these words: "Since the beginning of my reign, my only ambition has been to serve my country. Tomorrow, as yesterday and today, I shall remain faithful."

Premier van Acker promptly took up the challenge. In a speech to the Senate he asserted that the Government had in its possession evidence of Leopold's belief in a German victory and of a voluntary meeting with Hitler at Berchtesgaden. The document on which this assertion was based was made public on Nov. 2. It turned out to be a detailed account of the much-discussed Berchtesgaden meeting, in November, 1940, written by Dr. Paul Schmidt, Hitler's personal interpreter. According to Schmidt's account, Leopold "thanked the Fuehrer for all he had done up to the present for Belgium." Schmidt also quoted the King as having declared that "he entered this conversation with the Fuehrer in full confidence because he knew how to appreciate the great work the Fuehrer has undertaken and knew his wish to give Europe a durable peace based on justice, collaboration and understanding between peoples. With such a program the Belgians would certainly cooperate." The King also was said to have urged Hitler to counter-act British radio propaganda in Belgium.

In releasing Schmidt's memorandum to the press, after a translation of it had been forwarded to the King in Switzerland, van Acker emphasized that the authenticity of the document was not in doubt since it had been recovered by the Allies in German archives. Nevertheless, Leopold vigorously denounced the memorandum as biased, declaring that Hitler's words had been attributed to him.

On Nov. 10, the Catholic Party, headed by Ed-

mond Ronsé, renewed its attacks on the Government in a passionate parliamentary debate, while the conservative press denounced what it termed a scandalous political campaign against the King. The two-day attempt to overthrow the van Acker Cabinet broke down again, as the Senate on Nov. 12 gave the Government a 69 to 35 vote of confidence. This new defeat, however, also failed to shake the royalists' conviction that Leopold would return after the general elections in the spring of 1946.

Economic Recovery. The fall of the Pierlot Cabinet was due primarily to its inability to cope with the tremendous economic problems that arose from liberation. At the start of the year the outlook was sombre indeed. Food was scarce and consumer goods were not available except at exorbitant prices. Badly needed supplies from abroad were slow in arriving and fell far short of expectations. The country's transport system was overburdened by the exigencies of the Allied armies. Cold weather, freezing the canals, added to the difficulties. As a result, industry could not get going, and unemployment was widespread for months.

With the advent of the van Acker Government, matters showed a tendency to improve. Coal deliveries increased, and by the end of March the output of electricity was large enough to maintain the supply of current day and night. The number of unemployed was reduced by 100,000 in two months. The end of the war in Europe brought further improvement, especially in transportation and foreign trade. In June, civilian mileage on Belgian railroads for the first time exceeded that of the military, if only by a small margin.

Throughout the summer, however, the Belgians complained that their allies were hampering, rather than helping, the country's economic convalescence. There was dissatisfaction in Brussels, in particular, with the slow and cumbrous functioning of lend-lease machinery. It was pointed out—and the Foreign Economic Administration in Washington confirmed this—that reverse lend-lease by Belgium was about four times as great as American lend-lease aid to that country.

Indeed, goods and services supplied by Belgium—especially through the Allies' use of port facilities in Belgium—were valued at \$67,500,000 by May 31, as compared with only \$14,166,000 worth of American lend-lease exports to Belgium by May 1. As the United States' indebtedness to Belgium mounted, the press and public clamored for cash payments wherewith to buy American goods not obtainable under lend-lease.

In an attempt to cope with the tremendous public debt, which in four and a half years of German occupation had risen from 66 billion francs to 156 billion, the van Acker Government introduced a drastic program of taxation. The new financial plan provided, among other things, for total confiscation of all benefits made during the period of occupation on deliveries to the enemy, and a tax of from 70 to 95 percent on excess profits made during the same period on business not involving the enemy. At the same time, the Government partially lifted the restrictions placed on all bank accounts immediately following liberation.

The steady progress of economic recovery was highlighted by an official report on Sept. 23 that, in spite of demobilization and the repatriation of 100,000 former prisoners of war, the number of jobless had fallen from 300,000 in February to 110,000 in September. By that time, coal production had reached about 70 percent of prewar figures, while electric service was almost normal.

On Oct. 20 it was announced in Washington that an interim settlement of lend-lease relations between Belgium and the United States had been reached. Under this agreement, the United States recognized that Belgian reverse lend-lease to date exceeded lend-lease aid by \$90,000,000 and promised to settle this amount in the near future, partly in cash, partly by transfer of surplus property in Belgium, and partly through deliveries of raw materials and other goods ordered by Belgium in the United States.

The Purge. The new Government pursued with vigor the purge of traitors and collaborationists which had lagged under the Pierlot regime. Among prominent collaborationists arrested during the summer were Gerard Ronsée who had served the Nazis as "Minister of Interior," Raymond de Becker, German-appointed editor of *Le Soir*, and Gen. Lambert Chardonne, accused of having recruited men for the traitorous Rexist movement.

The leader of the Rexist, Léon Degrelle, however, managed to escape Belgian justice, at least temporarily. Degrelle, who had served with the German Army on the eastern front, fled from the Stettin sector in a Nazi plane which crash-landed on a beach near San Sebastian, Spain, on May 8. Slightly injured in the crash, the Belgian Fascist leader was interned by Spanish authorities, who rejected, however, a Belgian request for extradition on the grounds that Degrelle was a political refugee. On July 29 it was learned in Madrid that an unsuccessful attempt had been made to kidnap Degrelle from the military hospital at San Sebastian "for a one-way ride across the French frontier."

Up to June 1, 1945, out of some 70,000 persons arrested on charges of collaboration with the enemy, 8,538 were held in jail and 19,736 in internment camps. Belgian courts by that time had sentenced 1,150 persons to death, most of them *in absentia*; prison sentences had been imposed on 5,284 persons, including 1,656 cases of judgment *in absentia*. The death sentence was executed in 33 cases.

After liberation, the Rexist and the Flemish Nationalist parties were outlawed, and their representatives were deprived of their seats in Parliament. The resulting reduction of members, from 202 to 181 in the Chamber, and from 167 to 151 in the Senate, materially strengthened the leftist and anti-Leopold tendencies in Parliament.

Production. Previous to the war Belgium's manufacturing, mining, intensive agriculture, and extensive foreign commerce enabled it to support one of the densest populations of Europe (712 per square mile on Dec. 31, 1938). The area under cultivation was substantially expanded in 1941 and 1942, but showed a marked decrease in 1944 and 1945. Leading crops are wheat, rye, oats, potatoes, and sugar beets. Cattle numbers increased in 1945, approaching 1939 levels. On May 15, 1945, there were 780,556 dairy cows, 621,328 pigs, and 282,502 horses. Production of meat fell in 1944 to less than one-third of the prewar output; that of butter, margarine, and sugar also showed a marked decrease. Belgium possesses large mineral resources, especially coal, iron, and zinc ores. The average monthly output of coal was reduced from 1,979,000 metric tons in 1943 to 1,125,000 in 1944; that of pig-iron from 136,000 to 59,000 tons. Belgium also was an important prewar producer of glass, paper, cardboard, cement, cotton yarn, rayon, metal products, alcoholic beverages, etc.

Foreign Trade. Belgium's foreign commerce in

terms of money was drastically reduced during the war, from an average of 3,700,000,000 francs per month in 1939 to 750,000,000 francs in 1944. The decrease in quantity was even greater if the rise of prices during that period is taken into account. Imports in 1944 averaged 305,000,000 francs a month, exports 452,000,000.

Finance. The note circulation was 100,000 million francs in August, 1944. The Belgian franc was fixed at 176.6 to the £ sterling on Oct. 5, 1944. Belgium's domestic debt, rising steadily, reached 187,000 million francs in September, 1945.

JOACHIM JOESTEN.

BILLIARDS. Welker Cochran of San Francisco retained his world three-cushion title by defeating Willie Hoppe, the ageless cue artist from New York, 4,819 to 4,771 in a 90-block cross-country challenge tournament. The two stars played in thirteen cities from New York to San Francisco.

Willie Mosconi was the top man in pocket billiards for the second year in a row, the Toledo, Ohio, ace keeping his laurels when he turned back the challenge of the veteran Ralph Greenleaf of Detroit. The national amateur three-cushion crown was annexed by Edward Lee of New York.

THOMAS V. HANEY.

BIRTH CONTROL. A permanent injunction restraining U. S. Postmaster General Frank J. Walker from interfering with the mailing of the Consumer's Union *Report on Contraceptive Materials* was issued in March by Judge T. Alan Goldsborough of the United States District Court of Appeals. The injunction concluded a four-year action in the courts.

In May Mr. Walker was further overruled from barring Paul Popenoe's pamphlet, *Preparing for Marriage*, from the mails. The decision, said by a post office attorney to be "tantamount to a judicial repeal of the 72-year old (Comstock) law," upheld the Appellate Court's ruling that the Postmaster General had no power on his own judgment to exclude any publication from the mails without a hearing.

In Connecticut, the state legislature again defeated a bill which would permit a physician to prescribe birth control methods for married women when a question of health was involved. The bill was defeated by failure to report it out of committee. Two years must elapse before such bill can be reconsidered.

Previous to the defeat of the bill a statewide poll had disclosed an overwhelming majority, 85 percent of adult voters, in favor of birth control legislation.

Activities of the Planned Parenthood Federation. At the 24th Annual Meeting of the Planned Parenthood Federation of America held in New York City, Rev. Cornelius P. Trowbridge, rector of the Church of the Redeemer, of Chestnut Hill, Mass., was elected President of the Federation to succeed Dr. J. H. J. Upham, who assumed the chairmanship of the National Medical Council.

Forty of the city's most distinguished physicians at the Annual Dinner discussed "Responsibility for the Health of Tomorrow's Family." Dr. R. C. Williams, Assistant Surgeon General, United States Public Health Service, announced the Service's policy on child spacing—"any state deciding to develop a planned parenthood program could expect from Public Health Service the same consideration that would be given to any other proposal in connection with state health work."

Two \$500 awards of the Albert and Mary Lasker

Foundation were presented to scientists who had made the most significant contribution to research in the field of infertility and contraception. Dr. John MacLeod, Department of Anatomy, Cornell University Medical College, received an award for research in the motility of the human sperm. Dr. Felix J. Underwood, Health Officer of the Mississippi State Health Department, received the award for his contribution to better maternal and child health by including planned parenthood in the State public health program.

Before a luncheon audience of 1,300, Mrs. Franklin D. Roosevelt addressed a Symposium of representatives of eleven public and private agencies whose mutual interests share a concern for the well-being of the American family. Included in her address, which was carried over a nation-wide network, was an endorsement of the planned parenthood movement. In a subsequent interview, reported in a nationally circulated magazine, Mrs. Roosevelt reiterated her attitude toward planned families.

Planned parenthood services for Negro groups expanded considerably during the year. Full time Negro consultants have been added to staffs of Illinois, Maryland and Washington, D. C., leagues. Plans to include discussion of child spacing in the year's programs of the National Congress of Colored Parents and Teachers were formulated. Miss Mary E. Langford was added to the Federation's staff as field consultant on Work with Negroes. She has initiated and carried out demonstrations in various areas of the country. In October the Hannah Stone Planned Parenthood Memorial Center opened in Harlem, New York's congested Negro center, where the stillbirth and infant death rate and maternal mortality is three times that of any other section of the city. Offsetting such needed service was the closing in Philadelphia of the Maternal Health Center in the Douglas Hospital.

1945 witnessed a growing cooperation with mental and tuberculosis hospitals. Miss Lillian W. Turnbull, recently appointed State Director of the Iowa League for Planned Parenthood, reported cooperation with three of the State's mental hospitals whereby instruction in birth control became a part of the routine of discharging patients. Likewise patients on leaving the State Tuberculosis Sanatorium are referred to the Iowa City Clinic for contraceptive instruction.

With growing awareness that the minister is the key person to guide a program of marriage education and counselling, the National Clergymen's Advisory Council published a syllabus on such matters for use in seminaries, community training schools and by individuals interested in marriage and family counselling.

Latest reports indicate that Planned Parenthood services are now available in 599 active clinics; 241 are located in public health departments; 65 in hospitals; 256 in extra-mural clinics, and in 37 communities where no clinic exists, a referral system cooperated with local physicians.

Fertility Clinics have been added to the services of a number of clinics during the year; in the Chicago clinic over 100 women received treatment for infertility. Basal temperature charts to aid in determining optimum fertility in individual patients, together with patient instruction, were made available to clinics and private physicians.

Important among the publications of the year is the reprint of Dr. Jacob Yerushalmy's study of 7,000,000 births. Dr. Yerushalmy, chief statistician in the United States Public Health Service, con-

cluded from his study that the country's high still-birth rate could be lowered by properly spacing the time between births. The Federation's pamphlets, *The Soldier Takes a Wife*, addressed to the returning soldier, *Planning to Have a Baby?* and *Population and Peace* were the year's best sellers. Mailing lists included clergymen, physicians, public health officials, public and school libraries, teachers, hospital nurses, professors of economics, key "opinion makers," writers, authors of medical and nursing textbooks and thousands of individual requests for literature from every state in the union. During 1945 more than sixty articles favorable to the program of Planned Parenthood appeared in popular and professional magazines with national and state circulation. Polls taken throughout the year in schools and colleges have indicated an overwhelming number of youths in favor of sex education, including birth control information as a "practical help in preparation for marriage." A fifteen minute radio transcription of *Am I My Brother's Keeper?* dramatized by nationally known radio performers, was made available to all Planned Parenthood centers. Many leading radio stations throughout the country have included on their programs a discussion of the Federation's program.

FOREIGN REPORTS

China. Resolutions favoring birth control were passed by the Kuomintang, the Chiang Kai-Shek ruling party. "Eugenic measures" adopted by the party congress were far more advanced than that of any western power and became part of a post-war program.

Japan. Japanese leaders announced a definite program of birth control as solution to overpopulation. Baroness Shizuyo Ishimoto, long advocate of birth control for her country, has been named candidate for the lower house of the Diet. If elected she will seek to promote a planned parenthood policy and a democratic way of life for women.

Russia. While not banning the use of contraceptives, Russia embarked upon a "baby incentive" program to offset her war losses. Prizes and cash allowances were given to mothers as stimulus to large families.

Egypt. The Grand Mufti's decree that birth control was legally and religiously permissible to Moslem people was recently made known to the Western world in a translation from the Arabic.

France. The French Government was reported to have ordered vast quantities of testosterone (male hormone) for treatment of devitalized French soldiers returning from German prison camps.

India. Dr. Gyan Chand, Professor of Economics, Palna College, recommended birth control as part of a national health service to meet a birth and death rate, one of the highest in the world.

Canada. In July, a generous program of "baby bonuses" was instituted throughout the Dominion.

D. KENNETH ROSE.

BOBSLEDDING. The Mount Van Hooevenberg Olympic run at Lake Placid was closed during the war, but plans for its reopening and the resumption of title racing were given impetus near the close of 1945 when Gov. Thomas E. Dewey and legislative leaders approved the expenditure of \$12,000 to recondition the big New York slide.

No competition has been held since 1942, when the following champions were crowned: Jimmy Bickford and Bill D'Amico, North American two-man team; Jimmy Bickford, Hugh Bickford, Dick Morse and Lou Miron, North American and national A.A.U. four-man team; Bud Washbond and

Nick Ruscitto, national A.A.U. boblet, and the Bickfords, national two-man bob team.

THOMAS V. HANEY.

BOK FOUNDATION. The Mary Louise Curtis. A philanthropic organization which has as its principal activity the support of the Curtis Institute of Music in Philadelphia. Grants have also been made to the Settlement Music School, Philadelphia, and the Research Studio, Maitland, Fla., the latter being a kind of "laboratory" for painting. Financed by gifts of \$12,500,000 from Mrs. Mary Louise Curtis Bok, the Foundation was created in 1931 for the support of music, fine arts, science, invention, or general education. Address: 1726 Locust Street, Philadelphia 3, Pa.

BOLIVIA. A republic of South America. Area: 416,040 square miles. Population 3,533,900 (1942). Capital: Sucre is the seat of the Supreme Court and nominally the capital, but La Paz, the largest city, is the actual seat of the Government.

About three-fifths of Bolivia is composed of tropical lowlands, the remainder of high plateaus and mountains. Humid tropical climate prevails in the lowlands, temperate in the plateau areas, and varying extremes of cold at altitudes above 13,000 feet.

Government. Bolivia is a centralized republic of 9 Departments, under the Constitution of 1938, which was amended by a Constituent Assembly elected in July 1944. The Constitution provides for a bi-cameral Congress: a Senate of 27 members (3 from each Department), elected for 6-year terms, one-third elected every 2 years; and a Chamber of Deputies of 110 members, elected for 4-year terms, one-half retiring every 2 years. Regular sessions of the Congress open on August 6 of each year for a 60-day period, which may be extended to 90 days when desired. The President is elected for a 6-year term, and is assisted by a Cabinet of 9 ministers.

The Constituent Assembly confirmed President Gualberto Villarroel, who had assumed the presidency in December 1943 as a result of a coup d'etat which overthrew the government of President Enrique Peñaranda del Castillo.

Events, 1945. Bolivia was in a critical political situation at the turn of the year, as liberals in the other American countries, the opposition within Bolivia, and Bolivian exiles abroad opened fire on the new Government which had been set up on the last day of 1944. The year's-end shakeup had restored the allegedly pro-Nazi Nationalist Revolutionary Movement (MNR) to power, with its leader, Victor Paz Estenssoro, in the post of Finance Minister, although elimination of MNR influence had been one of the conditions on which the other American republics had recognized the regime of President Gualberto Villarroel in mid-1944.

The Government in La Paz was officially silent in the face of charges of double dealing, but its supporters argued that the Army did not wish to continue governing indefinitely, and that it had no other choice but to call on the country's largest party and the one with the heaviest representation in the Constituent Assembly. It was only because the Government had made it so that the MNR was the dominant party, the opposition countered.

Enemies of the Villarroel regime found an immediate issue in the fate of the aged Senator Luis Calvo, Genuine Republican, and Senator Felix Capriles, Unified Socialist, who had been missing since the November 1944 uprising in Oruro. Late in January the bodies of the two senators were

found at the bottom of a ravine on the road to Yungas, near La Paz. Their hands had been tied behind their backs and their skulls crushed. The opposition charged that they had been murdered by the Government. This issue continued to agitate the country throughout the year; as late as November 21 a minority bloc in the Constituent Assembly paid posthumous tribute to Calvo and Capriles.

Reports on conditions within censorship-shrouded Bolivia varied widely during the early months of the year. Exiles, representing both rightist commercial and industrial interests known to Bolivians as *La Rosca* (the Ring), and the Leftist Revolutionary and Communist parties insisted that the Villarroel regime was fascist and was carrying on a reign of terror. Other observers reported that conditions were fairly normal and that the more severe repressive measures had ended with the liquidation of the November revolt. They stressed the nationalistic and socialistic character of the Government and its determination to brook no serious opposition, but saw signs that it was adopting a less extreme position than at the beginning of its power. On February 16, President Villarroel signed a decree lifting the state of siege; and a crisis within the MNR led to the expulsion of reportedly pro-Nazi Dionisio Fojanini as a "traitor."

The exiles continued their opposition, however. Exiled leaders of five political parties cabled the Mexico City Inter-American Conference on Problems of War and Peace from Chile to call attention to the "bloody deception" by which the Villarroel regime had won diplomatic recognition.

And in June the Bolivian Democratic Union organized in La Paz in 1944 was reorganized in Santiago, Chile, to include the same five parties: Liberal, Genuine Republican, Republican Socialist, Unified Socialist, and Leftist Revolutionary (PIR). The coalition denounced Villarroel's regime as terroristic and Nazi-Fascist and pledged itself to carry on an open and relentless battle against it. Luis Fernando Guachalla, former Bolivian Ambassador in Washington, was elected president of the Bolivian Democratic Union. (Late in September the Republican Socialists reiterated their opposition to the Villarroel Administration but withdrew from the UDB.)

Bolivia witnessed a strange political interlude when on March 12, according to an official announcement, several men ambushed and fired on an official car in which Villarroel and his family were driving between La Paz Heights and the city. One bullet struck the car but the rest went wild, it was said; the assailants were arrested.

A few days later the Government issued a correction: "The act was committed by persons without any political affiliation who, being in a state of drunkenness, tried to halt the automobile in order to get transportation back into town. They have been placed at the disposal of ordinary authorities for attempts against the public safety." The men arrested were reported freed on March 28.

The Constituent Assembly was scheduled to convene at the beginning of July but was unable to do so for two days because of lack of a quorum.

On the second attempt, only 66 of 137 legislators appeared, including members of the MNR and a few others; a majority of the opposition delegates were no longer in the country. The session finally got under way on July 4.

On July 5, Interior Minister Edmundo Nogales denied rumors of unrest, declared that domestic tranquility was a necessary prerequisite to eventual retirement of the Army from the Government and

establishment of rule by political parties, and guaranteed administration aid in the reorganization of political groups. The opposition, he charged, was carrying on a campaign of agitation and subversion.

One of the first acts of the assembly was to approve unanimously a general amnesty decree covering "all persons involved in political crimes," including participants in the previous November's abortive uprising. Villarroel declared on July 26 that he would approve the measure, but he pledged "vigorous and energetic defense" of the principles of the December 1943 revolution which had placed him in power. A month later PIR leader Ricardo Anaya, exiled in Chile, stated that the first of that party's leaders to test the amnesty by returning to Bolivia had been arrested.

Altering an earlier schedule, the assembly agreed on August 1 to remain in session until the end of the year and to reconvene as a regular congress on August 6, 1946. On October 9 it prepared to transform itself into a congress by drawing lots to eliminate 64 members. Those eliminated included 29 MNR members, 16 independents, 9 Liberals, 8 independent Socialists, 1 Genuine Republican, and 1 member of the PIR.

The assembly on October 31 elected Jesus Montellano Vice President of the republic, and it adjourned *sine die* on November 24. President Villarroel and Vice President Montellano solemnly swore to comply with the constitutional reforms adopted by the assembly, which included: women's suffrage in municipal elections; a six-year presidential term instead of four; freedom of labor unionization; juridical equality of husband and wife before the law; recognition of common-law marriages after two years; and authorization to the Government to establish export monopolies in certain raw materials.

Another factor arose to plague the Villarroel Administration as the year neared an end. For months the President had been trying to win the support of the Indian masses of Bolivia by promising them land and the abolition of forced labor.

Some of them took him literally and tried to seize land. Bloody clashes resulted which intensified the problems of the Government, already serious enough because of the bad economic situation. And in the last weeks of 1945 the four parties of the Bolivian Democratic Union again reorganized their coalition, re-naming it the Democratic Anti-Fascist Front and issuing a fiery manifesto against Villarroel.

Economic Conditions. Mounting living costs kept Bolivia in a precarious economic state during 1945; economic pressure contributed largely to the instability of the Government.

President Villarroel high-lighted one of the country's basic economic problems early in January, when he declared that it was necessary for the nation to feed itself before it could be free to carry out social progress. He outlined a program for the systematic development of the cattle industry and wheat farming, and a few months later the Government put forth a postwar economic plan which included: (1) restrictions on the circulation of foreign exchange, to build up reserves; (2) encouragement of domestic industry; (3) integration of the eastern departments into the national economy so that the tin industry could be supplemented as a source of national wealth by oil and agriculture. On March 28 it was announced that the Bolivian Development Corporation and the United States Export-Import Bank had granted an estimated \$360,000 in credits to local industries

to aid them in reducing the republic's needs for imported food, particularly fruit and meat. "The time is short," Finance Minister Paz Estenssoro told a correspondent, "and if we do not set up our own industry and grow our own food, then Bolivia might become a ghost country."

But tin was still the mainstay of the Bolivian economy, and the end of the war in Asia and the prospective reopening of Far Eastern mines lent a sense of urgency to the country's economic planning which was reflected in the political tension. Cabinet ministers believed that they had about two years in which to put their economic house in order before the Malayan tin mines were again shipping to the western world. It was a gigantic task, and the determination of the ruling soldiers and nationalistic, socialistic members of the MNR to accomplish it against any opposition may have explained some of the ruthlessness of the Government.

The Foreign Economic Administration in Washington announced late in February that it had signed a new tin contract with Bolivia. It provided a 3½ cents per pound price increase for the balance of the life of the basic tin contract; a retroactive increase of 2 cents a pound for the period, July-December 1943; a new schedule of smelter charges; and maintenance of standards of health and working conditions for labor.

On February 11 the Villarroel Government approved a 1945 budget of an estimated \$25,040,000, including: \$5,300,000 for the armed forces; \$1,740,000 for the Interior Ministry; \$600,000 for the Foreign Ministry; \$3,620,000 for education; \$920,000 for labor; \$1,660,000 for public works; \$480,000 for agriculture; \$700,000 for communications; and \$1,720,000 for "obligations of the state."

Reviewing his 21 months in office, President Villarroel declared in October that his administration had curbed inflation, stabilized the currency, aided agriculture and industry, and advanced social reform. Nevertheless, on November 22 he found it necessary to warn the country to prepare to face an acute economic crisis in 1946. The national budget would be reduced by about one-sixth, he declared, and he expected every Bolivian family to reduce its own expenditures. He foresaw no improvement until the end of 1947, when the measures the Government was taking should have effect.

Foreign Relations. Although liberals in the other American republics were critical of the character of the Bolivian Government, there was little formal change in relations between La Paz and other capitals during 1945.

The keynote of Bolivian-United States relations was sounded early in January, when the Bolivian Ambassador in Washington, Victor Andrade, said that the return of the MNR to the Government would not mean a change in its policy of cooperation with other countries of the hemisphere. On the same day, officials of the United States Department of State asserted the same thing.

The United States scored a diplomatic success early in the spring, when it shipped 10,000 tons of wheat to Bolivia to relieve a shortage caused when alleged transportation difficulties held up a wheat shipment from Argentina. It was announced on July 26 that the Bolivian Development Corporation had signed a \$500,000 contract with a United States firm for construction of a highway between Cochabamba and Santa Cruz.

Relations with Argentina, traditionally determined on hegemony over its weaker neighbor, preoccupied the Bolivian Foreign Ministry.

The most active issue between the two countries was that of smugglers who were trying to run rubber into rubber-hungry Argentina. Early in March the Ministry of Agriculture reached an agreement with the United States Rubber Development Corporation to control this smuggling, which was draining away rubber needed for the war effort of the United States. The agreement provided for transit permits for rubber shipments within the national territory, careful watch on the frontiers and declarations by producers of all stocks on hand.

In return, the Bolivian Government was to receive \$30,000 to fight smuggling and \$200,000 to increase rubber production.

On April 17, President Villarroel, other Bolivian officials, and Argentine representatives attended the opening of an Argentine Industrial Exposition in La Paz. The fair drew praise from the local press; *La Calle* declared that "the public has been impressed by the enormous program of Argentine agriculture, stock raising and manufacturing." The exposition closed in the middle of May, after having been visited by some 62,000 persons.

This effective Argentine propaganda was backed up by action. On May 31, the Bolivian Government published a decree authorizing the establishment, in La Paz, of a branch of the Argentine National Bank, and a week later President Villarroel announced a program of economic collaboration with Argentina, calling for a large Argentine investment in the development of Bolivian oil and joint completion of the Yacuiba-Santa Cruz railroad. Villarroel told the press on July 20, that Bolivia was then sending 120 cubic meters of petroleum daily to Argentina, and that this amount would shortly be increased to 150 cubic meters.

At the same time, the Bolivian Government counteracted Argentine imperialism by dealing with Argentina's rival, Brazil. During the spring Foreign Minister Gustavo Chacón visited Rio de Janeiro and brought back an agreement which covered: (1) a method of financing the projected Vilavila-Santa Cruz railroad; (2) speeding of construction of the Corumba-Santa Cruz railroad; and (3) intensification of oil exploration in eastern Bolivia.

The perennial Pacific seaport issue between Bolivia and Chile became active again when Victor Andrade, Bolivian delegate to the United Nations Conference at San Francisco, expressed the hope that at some time in the future the Assembly of the world organization might study the possibility of revision of the 1904 treaty by which Bolivia had lost her seacoast to Chile. The hope was repeated in La Paz and the Chilean press, as usual, rose to the bait, but no action was taken and the furor died down by the end of the year.

Other 1945 developments in Bolivian foreign relations: In September, the Constituent Assembly approved six commercial, cultural, and transportation conventions which had been negotiated with Paraguay in 1939, and later that month President Villarroel paid a state visit to Paraguay; establishment of diplomatic relations with the Soviet Union was formalized on April 19; Bolivia severed diplomatic relations with the Franco Government of Spain on September 31, because of Spanish "hostility" to the democratic allies during the war.

The People. Over half of the total population of Bolivia are Indians; 32 percent are of mixed blood; 13 percent are of European descent (chiefly Spanish). Density of population per square mile ranges from 0.6 in the tropical lowlands to 28.5 in the area of Cochabamba. Largest cities are: La Paz, 301,000; Cochabamba, 60,000; and Oruro, 50,000.

Spanish is the official language, but in Indian communities native dialects are spoken.

The State religion is Roman Catholic, but other faiths are freely tolerated.

In 1939 about one-fifth of the population over 7 years of age was estimated to be literate. Primary education is now free and compulsory. In 1942 there were 1,766 primary schools with a total enrollment of 160,283; in 1941, 77 secondary schools had a total enrollment of 11,255. There are 6 universities in Bolivia.

National Economy. Mining is the outstanding industry of Bolivia. Tin is the most important mineral produced, although production is expensive because of the complex nature of the ore. During the period 1938-41, minerals constituted more than 90 percent of the total value of Bolivian exports, with tin accounting for about 70 percent. Bolivia also produces tungsten, gold, silver, copper, bismuth, lead, antimony, zinc, and petroleum.

Agriculture has not been well developed in Bolivia. About 5 million acres are estimated to be under cultivation. Productivity of the land is low and modern agriculture machinery and methods are not used. Most crops raised in the country are grown for the domestic market, but some dried fruits, coffee, rubber, cinchona, cacao, and nuts are exported, as are some cattle and cattle products.

Lack of cheap power and coal has limited development of industry in Bolivia. What little manufacturing there is, is centered in the Department of La Paz. Industries include processing of foodstuffs and beverages, textiles, furniture, tobacco, glassware, and chemical products.

Foreign Trade. Bolivian exports usually exceed imports. Since Bolivia has no seacoast, all foreign trade is conducted through Argentina, Chile, or Peru, which grant special privileges to Bolivian commodities. In 1942, exports totaled 227,104,000 bolivianos, of which the value of tin amounted to 163,907,000 bolivianos; of other minerals, 54,195,000 bolivianos (about 96 percent of all exports). In that year the United States received 65.7 percent of the total exports; the United Kingdom, 31.9 percent; Argentina, 2 percent.

Bolivian imports consist chiefly of manufactured products. In 1942, imports totaled 124,883,000 bolivianos. Manufactured articles represented over one-half of the total; foodstuffs and beverages about 28 percent; raw materials some 15 percent. Of total imports for that year the United States provided 39.9 percent; Argentina, 26.8 percent; Peru, 14.9 percent; Chile and the United Kingdom each supplied about 6 percent.

HARRY B. MURKLAND.

BONIN ISLANDS (*Ogasawara Gunto*). An archipelago of 27 islands in the western Pacific, about 550 miles south of Tokyo, Japan. The chief islands are Chichi (10 sq. mi.), Haha, Ani, Ototo, Mei, Yome, Muko, and Nakadachi. Total area: 30 square miles. Population: 6,000 in 1940. Capital: Omura (on Chichi). The principal agricultural crops are sugarcane, pineapples, and bananas. The Bonins passed to the control of United States forces following the surrender of Japan to the Allied nations in 1945.

BOWLING. America's popular winter sport celebrated its fiftieth anniversary last year and its tremendous growth since 1895, when it became an organized and well-governed game, is shown by the legion of 20,000,000 followers that it has today. The lifting of travel restrictions came as a birthday present to the American Bowling Congress, but a little too late to permit renewal of major championships.

However, all the big events of the prewar era are on the 1946 schedule.

With national tourneys curtailed, individual play again was overshadowed by the great contribution of the Bowlers Victory Legion to the war effort and the peace effort. The league raised more than \$300,000 to provide recreational kits for service men, drawing from Gen. Dwight D. Eisenhower a letter of thanks that commended the nation's bowlers for "helping to make the life of overseas men more pleasant." League members also played important roles in War Bond sales and various charity fund drives.

Among the stars of the year in individual play were Joe Wilman of Chicago, winner of the match-play crown; Buddy Bomar of Chicago and Andy Varipapa, New Yorker. William Kenet and Walter Rappenhagen of Detroit led in doubles and Mrs. Marion Gorman, another Detroit, ranked among the best women competitors. Eckhardt and Becker Beers of Detroit came out on top in major team bowling.

THOMAS V. HANEY.

BOXING. With the majority of champions and other leading performers in the armed forces our boxing promoters once again depended on quantity rather than quality to maintain their financial resources. There was no dearth of boxing shows and the talent displayed evidently pleased the fans for they kept coming back for more. Mike Jacobs, named "Promoter of the Year," kept Madison Square Garden's turnstiles clicking with 42 shows that drew receipts of \$2,214,968, the Rocky Graziano-Freddie Cochrane, Tami Mauriello-Lee Oma and Graziano-Harold Green bouts each going over the \$100,000 mark.

Championship bouts were rare, most of the titles having been frozen during the war years. Willie Pep, the little Hartford, Conn., battler, was the only universally recognized champion to enter the ring in defense of his crown and he gave a great exhibition in defeating Phil Terranova of the Bronx in their featherweight meeting at the Garden. Pep, who served a hitch in the Navy, was released and then drafted for the Army, won recognition as the "Fighter of the Year." The Nutmeg Kid took part in seven battles in all, winning six and drawing in one to add luster to a brilliant record that at this writing showed 90 triumphs in 92 engagements.

More than 400 boxers returned from the wars before the close of 1945 and titleholders lost little time getting into training for the defense of laurels that no longer are frozen. Biggest ring news of the year was the return of the heavyweight king, Joe Louis, and his arch rival, Billy Conn, and Matchmaker Jacobs quickly signed the two for a title bout in June.

In addition to Louis and Pep, the champions include Jackie Patterson, Scotland, flyweight; Manuel Ortiz, El Centro, Calif., bantamweight; Bob Montgomery, Philadelphia (recognized by New York Commission) and Ike Williams (recognized by N.B.A.) lightweights; Freddie Cochrane, Elizabeth, N.J., welterweight; Tony Zale, Gary, Ind., middleweight, and Gus Lesnevich, Cliffside Park, N.J., light heavyweight.

Col. Eddie Egan, former amateur heavyweight king and Rhodes scholar, succeeded the late Gen. John J. Phelan as chairman of the New York Commission and introduced a new point system to supplement the old method of scoring on rounds. Under Egan's plan there were no draw decisions in main events in New York and virtually no disputed verdicts. The new plan has merit.

The end of the war saw boxing begin to boom in other lands. Bruce Woodcock, 24-year-old railway worker, won the British and Empire heavyweight honors by knocking out Jack London, who announced his retirement from the ring soon after that setback. Patterson, the world flyweight ruler, added the British Empire bantamweight crown to his trophies when he outpointed Jim Brady at Glasgow. Herb Narvo kept his heavyweight championship of Australia, Jimmy Webster won the South African bantam crown, Ken Shaw retained his Scottish heavyweight diadem and Nikolao Korolev continued to rule the Soviet heavies.

Amateur glove swingers had another busy year in this country and a pair of Indian boxers on Oklahoma City's five-man team stole the show at our national A.A.U. bouts, Amos Altson taking the bantam title and Virgil Franklin starring in the featherweight ranks. Other A.A.U. victors were Keith Hamilton, New Orleans, 112 pounds; Jetson Arnold, Philadelphia, 135 pounds; Abe Lee, Chicago, 147 pounds; Allan Faulkner, Buffalo, 160 pounds; Richard Nutt, Alexandria, Va., 175 pounds and Charles Lester, Cleveland, heavyweight.

The Coast Guard Academy, with five of its men taking individual honors, won team laurels in the Eastern Intercollegiate championships. Peter Thistle, 120; Brian O'Hara, 127; Allen Pearce, 135; J. L. Wright, 175, and George Richardson, heavyweight, triumphed for the Sailors. Army's fighters took the other titles, Stephen Connor, 145; Amos Jordan, 155, and John Castle, 165, scoring for the West Pointers.

THOMAS V. HANEY.

BRAZIL. A republic of South America. Area: 3,286,170 square miles. Population: 44,460,000. Capital: Rio de Janeiro.

Brazil is the largest country in South America and the fourth largest in the world. Over half of its total surface is composed of a plateau of 1,000 to 3,000 feet elevation. More than two-fifths of the country consists of the Amazon and part of the Plata lowlands. The lowlands and eastern coastal plain are tropical; most of the plateau region is sub-tropical; the southeast is temperate in climate.

Government. Brazil is a federal union of 20 states and five border territories. Getulio Dornelles Vargas became President by a coup d'état in October 1930. In 1937 Vargas dissolved the Congress and assumed direct control of the government. A new Constitution was drawn up in 1937 which was never made effective. Under a decree issued in 1939, the national government assumed virtually complete control over state governments. President Vargas resigned in October, 1945. Supreme Court Chief Justice José Linhares became acting chief executive pending elections, which were held on Dec. 2.

The People. Nearly one-half of the total population of South America lives in Brazil. It is estimated that about 60 percent of the people are of European origin (chiefly Portuguese, Italian and German); 30 percent are of mixed blood (white, Negro, and Indian); 8 percent are Negro, and 2 percent Indian. The foreign population consists mostly of Italians, Portuguese, Spanish, Germans, and Japanese, and is largely concentrated in the south and southeastern sections of the country. The number of persons per square mile ranges from 0.7 in the state of Amazonas to 114 in the state of Rio de Janeiro.

The three largest cities are: Rio de Janeiro, 1,780,000; São Paulo, 1,315,000; and Recife, 850,000.

The official language of Brazil is Portuguese, but

Italian and German are spoken in some sections of the southern states.

The predominant religion is Roman Catholic.

It was estimated in 1942 that about 50 percent of the adult population is literate. In 1941 there were 42,794 primary schools with a total enrollment of 3,350,737 students; 4,572 secondary schools with a total student body of 419,674; 4 universities and 57 separate faculties and institutes with a total registration of 21,098 students.

National Economy. Agriculture constitutes the basis of Brazilian economy. It is estimated that over three-fourths of the total population derives its income directly from agriculture. Livestock and livestock products rank first in domestic importance, while coffee and cotton lead all other agricultural crops in foreign trade.

Brazil now ranks fourth among cattle-raising nations of the world with some 42,000,000 head. In 1940 there were over 6,000,000 goats; more than 25,000,000 swine; and about 15,000,000 sheep. Livestock slaughtered in 1943 totaled 11,397,000 head; cattle and hogs accounting for more than 9,114,000. Meat, hides, and skins are the chief animal products. Hides, skins, frozen and preserved meat are exported.

The most valuable agricultural crops are coffee, cotton, and corn. The country produces about one-half of the world's output of coffee; ranks third among world producers of corn; and leads the countries of the Western Hemisphere in production of rice. Other important agricultural crops include: sugar, manioc, beans, citrus fruits, bananas and other fruits, tobacco, wheat, oil-bearing seeds and nuts, and cacao. Intensive efforts are being made to increase the country's output of rubber. Brazil produced 9,400,000 bags (of 60 kilograms) of coffee in 1944; 470,000 metric tons of cotton in 1943-44; 1,790,000 metric tons of rice in 1944; 1,300,000 metric tons of sugar in 1943-44; 1,998,887 bags (of 60 kilograms) of cacao in 1943; and 76,762,473 bunches of bananas in 1942. For the past 10 years Brazil's annual corn crop has averaged about 5,500,000 metric tons. Important forest products are also produced.

Brazilian industry has been developing rapidly since 1900. In 1940 Brazil had 52,379 manufacturing plants; by 1943 the number had grown to 100,000, employing 1,500,000 workers; São Paulo is the leading industrial state. In 1943 the most important manufactures were: foodstuffs, comprising about 32 percent; textiles, 19.8 percent; clothing and toilet goods, 7 percent; chemicals, 6.7 percent. It is estimated that the total value of Brazilian industrial production reached more than 31,000,000,000 cruzeiros in 1943. Sericulture, with an annual production in 1944 of 300,000 kilograms of silk yarn, representing a gain of nearly 400 percent in four years' time, is a growing industry.

With gradual development of Brazil's iron and coal deposits, her heavy industry is increasing. In 1944 the volume of pig iron produced was four times the output of the previous year; production of steel and sheet metal trebled in volume in the same period. Plans for a large scale steel industry were begun in 1941 with the start of construction of the \$75,000,000 Volta Redonda plant, with an estimated annual capacity of 350,000 tons of steel ingots, or 250,000 tons of finished products.

Foreign Trade. Brazil's foreign trade reached a high record in 1944. Exports totaled 10,711,338,000 cruzeiros, 80 percent of which was agricultural, livestock, and forest products. The largest single export item was coffee beans, valued at 3,879,349,000 cruzeiros. Cotton piece goods valued

at 1,046,193,000 cruzeiros ranked second, and raw cotton valued at 667,941,000 cruzeiros, third. Rubber exports in 1944 totaled 365,389,000 cruzeiros, an increase of 135 percent over 1943, though exports of tires and tubes decreased. During 1944 marked increases in exports were achieved for: pine, oiticica oil, sugar, rice, fruits, maté, corn, and tobacco; exports of cocoa dropped slightly in value but the value of cocoa butter exports more than tripled. During 1944 Brazil exported 107,640 tons of raw cotton; 13,555,484 bags of coffee; 25,805 tons of preserved beef; 15,860 tons of other preserved meats; 24,253 tons of hides and skins; 296,000 metric tons of pine; 110,146 metric tons of cacao beans and cocoa butter; and 48,692 metric tons of maté.

The total value of Brazilian imports for 1944 amounted to 7,885,836,000 cruzeiros, an increase of 29 percent over 1943. Foodstuffs, valued at 1,687,835,000 cruzeiros, made up the largest group of imports, of which wheat was the leading item. Manufactured iron and steel products, valued at 551,697,000 cruzeiros, ranked second. Imports of scientific instruments and accessories increased over 69 percent; imports of cutlery, tools, and utensils more than trebled. Newspaper and paper imports showed an increase of 217 percent over 1943, and imports of pharmaceutical products more than doubled. Notable increases were made in importation of electrical apparatus and of automobiles and accessories.

Ninety-three percent of Brazil's total imports in 1944 came from the American republics, which took 76 percent of Brazil's exports. The United States took 53 percent of Brazilian exports, and provided 61 percent of its imports. Argentina was the principal South American customer, taking 13 percent of Brazil's exports and furnishing 21 percent of its total imports. England, Spain, and Sweden were the chief European markets for Brazilian exports.

Events, 1945. There was an air of expectancy over Brazil as the year opened. President Getulio Vargas's most recent promise "to consult public opinion," made in a New Year's Eve speech, stirred up more talk of politics and elections than the country had heard in a long time. Newspaper editorials discussed election procedure and carefully worded literature about the long-banned political parties was circulated through the mails. The people of Rio de Janeiro speculated widely as to the date of their first elections since 1934.

On February 22 the Rio newspaper, *Correio da Manhã*, published the first open attack on the Vargas administration in years. Major Amílcar Dutra, director of the Department of Press and Propaganda (DIP), the government censorship agency, acted to suppress the paper, but a group of important publishers threatened to close their papers voluntarily if this was done. The Inter-American Conference on Problems of War and Peace was just beginning in Mexico City, and the Government dared not engage in open war with the press at that time. The result was complete collapse of press censorship in Rio and São Paulo; journalists complained, however, that it remained in effect for some time in other parts of the country.

The end of censorship marked the beginning of free political activity. On the last day of February Vargas granted the Cabinet's request that he call a general election for President and Congress, and on March 7 crowds gathered in Rio for the first political meeting since 1937; they heard students and opposition leaders attack the Government. At

a rally in downtown Rio on March 23, sponsored by student groups and the National Defense League to honor the Brazilian Expeditionary Force, Communism was openly espoused for the first time in years.

Two presidential candidates came immediately to the fore. War Minister General Enrico Gaspar Dutra was the choice of Administration forces, while Air Brigadier General Eduardo Gomes was supported by opposition groups. Political leaders from every state met in Rio early in April to organize the National Democratic Union behind Gomes, while on May 9 Dutra backers announced the establishment of the Social Democratic party. There was small difference between the platforms of the two parties. Both were democratic and liberal-conservative in attitude, and inclined to express themselves in vague generalities. The real issue was between the friends and enemies of Vargas.

Vargas himself was a political enigma. He stated several times that he was not a candidate, but his denials never seemed categorical. His most important statement of purpose was made in a speech in Vasco da Gama Stadium in Rio on May Day, when he told 60,000 workers that his "mission" was completed and he was ready to retire to private life. He enumerated the social gains achieved during his administration, stating: "I have lifted the nation and the workers' conditions to levels unheard of before." He endorsed the candidacy of Dutra, whom he said "merits the confidence of the nation." The President then announced that he would remain in office during the forthcoming election and would turn his office over to a successor "legally chosen by the people." But he finished with the promise that if the workers ever needed him in the future, "you may count on me."

At the same time Vargas was carrying out a series of liberal measures which his opponents labeled as political in motive. On April 5 Rio's police chief, João Alberto Lins de Barros authorized the reopening of the anti-Axis Society of the Friends of America whose closing the year before had led to the resignation of Foreign Minister Oswaldo Aranha. On April 22 Aranha assumed the presidency of the society, to which he had been elected but had been unable to accept because of its closing.

On April 11 a special court granted writs of habeas corpus to a group of prominent exiles, authorizing their return to Brazil: Octavio Mangabeira, former Foreign Minister in exile in New York; Paul Nogueira in Buenos Aires; and Armando Salles de Oliveira, a prominent political leader who had already returned to São Paulo. (Salles de Oliveira died on May 19.)

On April 18 Vargas decreed amnesty for all political prisoners. Most prominent of these was Luis Carlos Prestes, communist leader who had been in prison for nine years. Before his release Prestes had congratulated Vargas on Brazilian recognition of the Soviet Union, which had taken place on April 2, and some newspapers charged that a Vargas-Prestes alliance was in the making.

A proposed electoral law was published in the *Diário Oficial* on May 1 for comment and criticism, and on May 28 Vargas issued a decree-law setting congressional and presidential elections for December 2. Elections of state executives and legislatures would follow on May 6, 1948. The head of state and cabinet members must resign within 90 days before election if they were candidates for office. The code provided for obligatory voting for all adult males except soldiers and flatterers, and

for employed women, forbade the use of party uniforms and civilian militia, and provided a minimum of 1,000 votes for registration of new parties.

On May 25 Vargas decreed abolition of DIP (Department of Press and Propaganda), censorship agency since 1940 for press, radio, cinema and theater; and establishment of a National Department of Information under the Ministry of Justice.

In another controversial move, made on June 22, Vargas created an Administrative Commission for Economic Defense with wide enforcement powers over all businesses, both domestic and foreign. The order included the right to warn, then to intervene or expropriate any firm which the new body, headed by Justice Minister Aagemmon Magalhães, considered guilty of "acts against the national economy or contrary to the public interest." Vargas's opponents, who had been ceaselessly attacking the Government's wide control of the nation's economy, and accompanying rising prices, at once labeled the decree a political weapon which would give the President life and death power over their businesses. So wide-spread was the opposition, both in Brazil and in foreign countries, that on June 28 Magalhães announced postponement of effectiveness of the decree to August 1 so that commercial groups might study it further. The decree became effective on that date without important amendment, but Magalhães stated that it would take 30 days more to implement it, and that during that period there would be no official intervention in any business enterprise. Actually, the decree was never enforced and in November Provisional President Linhares repealed it.

There was an interesting development during the summer in the field of religion. Early in July the Catholic clergy were notified that Monsignor Carlos Duarte, Bishop of Maura, had been excommunicated because of "doctrinal errors." Duarte immediately announced the formation of a Brazilian Catholic Church free from Vatican ties, and assumed the title of Bishop of Rio de Janeiro. For years Duarte had openly criticized some aspects of Vatican policy and had objected to what he called "Fascist infiltration of the clergy." The new church was formally established on July 16. It would permit divorce, hold masses in Portuguese, and allow its clergy to marry. The clergy would be ordained by Duarte. Duarte also founded a political party, called the Christian Social Party, which on August 7 nominated Stelio Galvão Bueno, prominent Rio criminal lawyer, for President. "The principles of the Communists are also ours," Duarte stated.

The campaign continued through the summer, with Gomes and Dutra still the main candidates. Vargas's intentions remained unclear. He did not resign before September 2, as required by the electoral code, so he could not legally be a candidate. But organized groups of his followers, called *Queremistas* because of their slogan, *Queremos Getúlio*, continued to demand that he run, and Communist leader Prestes showed every sign of preferring Vargas to either of the other two aspirants. Tension was further increased when Prestes, later supported by the *Queremistas*, suggested that elections be held for a constituent assembly instead of for President, and that Vargas continue in office until a new constitution could be prepared.

United States Ambassador Adolf A. Berle Jr. took a hand in the campaign, implying the United States preferred the original plan to the constituent assembly proposal. The opposition applauded Berle but the Vargas forces cried "intervention."

On October 10 Vargas suddenly changed the rules by decreeing that state governors and legislatures be elected at the same time as the President and Congress. He also ordered state interventors to file copies of state constitutions (which did not then exist) within 20 days and to resign their posts 30 days before the election if they wished to be candidates. The opposition charged that this would permit the Vargas-appointed interventors to rig constitutions so as to permit their own elections as governors.

By the end of October, a crisis was obviously at hand. The possibilities of coup d'état, revolution, and counterrevolution were discussed freely in the newspapers and wherever Brazilians gathered. War Minister General Pedro Aurelio de Góes Monteiro made things worse rather than better by proclaiming, three times within four days, that elections would be held as scheduled on December 2.

The crisis passed from rumor to fact on October 27, when isolated street fighting broke out between supporters of Vargas and followers of Gomes. Police described the situation as completely calm on the night of October 28. Then, on the next day, Benjamin Vargas, the President's brother and one of the most hated men in Brazil, was made chief of police of Rio de Janeiro.

That evening the government radio station suddenly went off the air with no other explanation than that it had been ordered to suspend operations. A little while later, tanks, assault cars and jeeps moved swiftly through the city to take dominating positions at key points. And early in the morning of October 30 Góes Monteiro announced that Vargas would hand over the Government to Chief Justice José Linhares of the Supreme Court.

"It has not been a coup d'état, but a spontaneous and natural reaction with the support of all armed forces," Linhares declared as he took over the presidency.

The armed forces had, indeed, been the key to the situation. A large part of the army insisted that a new president be elected in December. Vargas had promised this. But his opponent feared he would use some last-minute excuse to stay in power. As the argument grew more heated, the situation became more chaotic and hence riper for a Vargas coup. The appointment of his unpopular brother Benjamin to the important Rio police post might have been the beginning of just such a coup. The army therefore moved against Vargas as a unit, and he stepped out.

Brazil took revolution in its stride. Tanks and machine guns remained at strategic points in the capital for a day or so, then disappeared. The December 2 elections were reaffirmed. A new Cabinet, including men who had remained aloof from politics during Vargas's 15-year rule, took office under Linhares, and on October 31 Vargas left for his São Borja ranch in southern Brazil.

The new Government clearly regarded itself as a stop-gap and functioned as such, devoting itself primarily to preparations for the election. Exhilarated by the prospect of a really free vote, Brazilians turned out enthusiastically and in large numbers; 7,000,000 registered for the December 2 poll.

The vote was free and orderly and, contrary to most forecasts, Dutra was an easy winner over his three opponents. (Near the end of the campaign the Communists nominated a non-Communist highway engineer named Yeddo Fiuza.) Vargas's influence was clearly apparent in the Dutra victory, and the former dictator himself was elected to Congress from his home state.

Foreign Relations. The Brazilian Foreign Ministry devoted most of its attention during 1945 to building up the country's war-won position as the second power in the hemisphere. Recognition of the Soviet Union was a step in this direction, as had been the despatch of the Brazilian Expeditionary Force to Italy. Joyous crowds estimated at more than 700,000 persons watched the home-coming parade of a 5,300-man contingent of the BEF on July 18. The day was declared a national holiday, and the troops were welcomed by Vargas and his guest of honor, U. S. General Mark Clark; a contingent of United States mountain troops took part in the parade.

Brazil declared war on Japan on June 6.

Continued close cooperation between Brazil and the United States was also marked during the year. United States Admiral Jonas H. Ingram, commander of the Atlantic Fleet, announced in July that "with the exception of the small staff of the naval operating base at Rio, the United States no longer operates at any base in Brazil." Admiral William Monroe, commander of the South Atlantic Squadron shortly afterward completed the formalities of handing over installations and left Brazil; thereafter that country had full responsibility for patrolling the South Atlantic. Monroe promised that "the United States after the war will do much for the Brazilian Navy."

Brazil was the only Latin American nation selected to participate in the conference of 21 nations which would consider peace treaties.

HARRY B. MURKLAND.

BRETHREN, German Baptist (Dunkers or Dunkards). A religious organization founded in Schwarzenau, Germany, in 1708 by a group of Pietists and established in Germantown, Pa., in 1719 under the leadership of Peter Becker. There are four denominations of Brethren in the United States, the largest and oldest group being the Church of the Brethren, or Conservative Dunkers, with headquarters at Elgin, Ill. See RELIGIOUS ORGANIZATIONS.

BRIDGES. War restrictions affecting bridge work were largely relaxed in 1945, but too late to begin construction on important projects. It is estimated that the early postwar period will require \$800,000,000 for highway bridges and \$250,000,000 for municipal bridges. Research has included experiments to determine the stresses in steel bridges under steam and electric locomotives at various speeds. Increasing projects for grade separation have led to study of the relative merits and economics of different types of highway bridges.

Studies of wind effects on bridges, due to the destruction of the Tacoma suspension bridge and the Chester truss bridge, have led to new designs for a 2,800-ft. suspension bridge at Tacoma, Wash. Measures have been taken also to reduce vertical oscillations in existing suspension bridges, and the 2,300-ft. span at Whitestone, N. Y., is to have the depth of its stiffening trusses increased from 11 ft. to 25 ft. Reports on wind forces as affecting bridges, by D. B. Steinman, have been published in the "Proceedings" of the American Society of Civil Engineers. The curious arrangement of suspension cables devised by Mr. Steinman for the "Skyride," aerial tramway at the Chicago World's Exhibition of 1932, is being developed for suspension bridges, including a type of military bridge.

An extraordinary and unprecedented structure is a concrete floating bridge in the form of a horizontal arch, lying on the water, for the crossing of

the Derwent River at Hobart, Tasmania. It is composed of 24 reinforced-concrete barges or pontoons arranged as an arch and connected rigidly by welding the steel reinforcing bars together; at the crown, or upstream point, is a 25th keystone pontoon. The length along the curve is 3,165 ft., and beside the roadway there is a walk and a water main. A concrete bridge over the Chattahoochee River, near Atlanta, Ga., has girders 220 ft. long, continuous over three spans of 65, 90, and 65 ft. A concrete arch bridge of 266 ft. span over the Crooked River, Oregon, carries the aqueduct of the Deschutes irrigation project. It is in the form of a truncated triangle, with two legs inclined at 45 degrees carrying the horizontal member, which is the conduit and extends beyond its supports to the sides of the canyon.

A contract for the foundations of the new Mississippi bridge at Memphis, Tenn., was awarded in July, but bids for the spans were later rejected as too high. This project is financed by Tennessee, Arkansas, and the city of Memphis. The project for a bridge over this river at Helena, Ark., has been extended again by Congress for one more year. A third project for the Mississippi is a high-level bridge at New Orleans, starting near the center of the city. It is to be of the cantilever type, with a main span of 3,000 ft. and two anchor-arm spans of 600 ft. Deep foundations will be required in the soft alluvial soil. It will carry two 24-ft. separated roadways, and provide for future construction of two similar roadways outside of the trusses.

A trend towards timber bridge construction was halted by military demands on the mills, but some log bridges of 40 to 65 ft. span were built to replace old and weak timber-truss structures. A timber highway bridge near Carlsbad, New Mexico, over the Pecos River, consists of 15 spans of 50 ft. on concrete piers. Each span has four shallow trusses covered by a floor of laminated timber, with a bituminous wearing surface.

A new railway line into Kansas City, opened in June, crosses the Missouri by a bridge having a 420-ft. vertical-lift span, three truss spans of 250 ft., and several girder spans. It is 2,625 ft. long, and was built jointly by the Milwaukee and Rock Island railroads. The Santa Fe Railroad completed a bridge across the Colorado River at Topock, Arizona. It is 1,507 ft. long, with three truss spans of 350 ft. and girder spans of 50 to 100 ft. The Southern Pacific Railroad replaced its noted but outgrown Pecos River bridge by a new cantilever bridge 440 ft. upstream. The old bridge, 300 ft. above water, was carried by tall steel piers, but the new one has concrete piers 275 ft. high, designed to withstand earthquake shocks.

A serious fire occurred in April in the floor of the 12½-mile bridge between San Francisco and Oakland. Owing to the great length of the bridge, there is a fire station on Yerba Buena Island, at the middle, with mains and hydrants along the roadway. Fires average five per month, but in addition there are about 14 false alarms and calls to stand by at automobile accidents. The traffic has grown so largely that plans for a second bridge are being considered. The Golden Gate suspension bridge at San Francisco may be taken over by the State, as the Bridge District is unable to meet the costs of operation and maintenance.

A twin double-leaf bascule bridge designed to carry the Congress Street extension across the Chicago River is to be of 170 ft. span, each part to have a 43-ft. road and 6-ft. walk. The State St. bascule bridge across this river is still in the future.

At Boston, a double-leaf bascule bridge of 225 ft. over the Chelsea River will give a 175 ft. channel and improved communication with South Boston. Pontoon bridges continue to be developed for civil and military use. The U. S. Navy Station at Long Beach, Calif., has a pontoon draw-span in which the two concrete pontoons, approached by hinged ramps, are drawn back under the approaches.

The U. S. Government has agreed to pay \$2,382,000 to the Gandy Bridge Co. for its embankment or causeway, with bascule bridge, across Tampa Bay, Florida. In 1944 the company refused to sell, and the Government seized it as an aid to war work. A similar work is proposed by the city of St. Petersburg, Florida. The so-called causeway across Lavaca Bay, Texas, which was opened in 1944, is a pile trestle 10,300 ft. long, with 20-ft. spans and a 50-ft. bascule drawbridge. A causeway is proposed by the Canadian Government to connect Cape Breton Island with Nova Scotia, replacing a car ferry service. It would carry a road and a railway line. In the Orkney Islands, north of Scotland, a causeway or embankment was built between islands along the Scapa Flow naval anchorage to prevent access by submarines. It is composed of rock-filled wire cages and concrete blocks of 5 to 10 tons. No bridge is required, as the normal entrance to Scapa Flow remains open.

Toll bridges come and go, as new projects propose tolls to repay the cost, while tolls on many bridges are cancelled. In South Carolina, the Cooper River bridge at Charleston is to be freed, the State Highway Department assuming the bond issue of \$4,150,000. California has freed the big Carquinez and Antioch bridges. Tolls were stopped on eight bridges in Kentucky, leaving only four State bridges and a few private structures.

Alterations to bridges include interesting operations. A bridge of three 306-ft. truss spans of the Illinois Central R.R., crossing the Tennessee River, was abandoned as its site would be submerged in the reservoir at the new Kentucky Dam. The spans were moved upstream 62 miles on barges and placed on new piers to carry the Nashville, Chattanooga & St. Louis R.R. To comply with flood control requirements, the Central Ave. bridge over the Kaw River at Kansas City is to be raised 10 ft. At Lewiston, Maine, an old bridge having seven 85-ft. spans was adapted to heavier loads by applying a stronger but much lighter floor. The "Long Bridge" of the Pennsylvania R.R., having 11 truss spans of 165 to 211 ft., and a swing span of 280 ft., was rebuilt with girder spans of half length supported by intermediate piers. Traffic was not interrupted. In raising a bridge over the Little Tarkio River, in Missouri, girder spans were lifted out by cranes and set back on the bank while the piers were built up to the new level. The one truss span was raised by jacks. At Cleveland, Ohio, removal of a river bridge, ordered by the War Department as an obstruction to navigation, was refused by the city on the ground that owing to the heavy traffic the new bridge should first be built. An old 320-foot California suspension bridge had its original timber towers replaced with steel.

Military, portable or sectional bridges have had wide application, and the members or sections have been built at numerous steel plants, large and small, throughout the country. Spans of the noted Bailey bridges were built across the Sabine and Neches Rivers, in Texas, by the Corps of Engineers, U. S. Army, to replace structures damaged by floods;

and in preparation for crossing the Rhine, engineer troops were trained by constructing pontoon bridges across the Columbia River. Of American design are the V-bridge, so called from the position of its trusses and an 80-ft. jack-knife bridge which folds up in two 40-ft. sections for transportation and can be handled by a truck-mounted crane.

The long-delayed bridge over the Uruguay river, between Uruguayana (Brazil) and Paso de los Libres (Argentina), is expected to be completed in December, 1945. It is 4,630 ft. long, carrying a road, railway, and sidewalk. In Bolivia, a bridge of the transporter or aerial tramway type has been built across the Espiritu Santo River. Tall steel towers carry track cables of 885 ft. span, on which rides a trolley operated by haulage cables. Suspended from the trolley is a car or platform 10 x 20 ft. At Montreal, Canada, repairs have been made to the stone piers of the Victoria Bridge, built in 1854 and slightly altered in 1890 when the original rectangular tubular spans were replaced with truss spans. At Ste. Rose, Quebec, welded, continuous girders, 1,550 ft. long, cover 14 spans of 90 to 126 ft. A St. Lawrence River highway bridge at Quebec, proposed by the provincial government, is to be two miles below the present bridge which serves both highway and railway traffic but is some distance above the city.

Extraordinarily complicated and rapid work has been done by the American and English forces in Europe to replace hundreds of railway and road bridges demolished during the war. This work, combining hard work, ingenuity, and speed, enabled the Allied forces to follow closely on the heels of the retreating Germans, and was continued after the surrender for handling supplies and restoring communications. Some 200 wrecked bridges had to be removed from the Albert Canal, in Belgium, to reopen navigation. About 400 railway bridges in Belgium were repaired or replaced. Although none of the noted Seine bridges of Paris were demolished, the French face great numbers of bridge renewals on the Seine and Marne. The noted Plougastel bridge, near Brest, with three concrete arches of 612 ft. span, had one of the spans broken. It is a double-deck structure, carrying a railroad and a highway. The U. S. troops built 14 bridges across the Rhine. Wreckage of Danube River bridges at Budapest had to be cleared away to prevent ice jams and flooding of the city. On the Burma war front, a 1,200-ft. pontoon bridge was built to carry the Ledo Road across the Irrawaddy; also a Bailey suspension bridge to carry the Stillwell Road across the Shweli River. (See Foundations.)

E. E. RUSSELL TRATMAN.

BRITISH CENTRAL AFRICA. An area of 478,027 sq. mi. lying between the Union of South Africa on the south, Mozambique on the east, Angola on the west, and the Belgian Congo and Tanganyika Territory on the north. It consists of Southern Rhodesia (150,333 sq. mi.), Northern Rhodesia (290,320 sq. mi.) and the Nyasaland Protectorate (37,374 sq. mi.).

Government. The administration of each of these three territories is separate, though the movement for their "amalgamation" has picked up momentum in recent years.

Southern Rhodesia is a self-governing colony with an elective one-chamber Legislative Assembly of 30 members to which the Cabinet (nine Ministries) is responsible. The franchise belongs to all British subjects with certain exceptions. The

natives, who constitute over 90 per cent of the population, are excluded from political life. The constitutional status of Southern Rhodesia is somewhere between that of a crown colony or a dominion. It is supervised by the Dominions rather than the Colonial Office. In 1937 a law provided for the establishment of native councils, representing local chiefs and notables, but with purely advisory functions. The capital is Salisbury.

Northern Rhodesia is a crown colony, in which the Governor is responsible to the Colonial Office in London. The Legislative Council now has an unofficial majority including a European nominated to represent the interests of the African population. The capital is Lusaka.

The Nyasaland Protectorate (formerly British Central Africa) is governed as a crown colony under the supervision of the Colonial Office. The Governor is assisted by Executive and Legislative Councils, both nominated. African provincial councils, composed of native chiefs and other responsible Africans, have been set up in each of the provinces for purposes of consultation. Zomba is the capital.

Events, 1945. The aspirations of those who have been asking for the political amalgamation of British Central Africa were partially fulfilled when on April 24 there took place in Salisbury, Southern Rhodesia, the first meeting of the new Standing Central African Council. *Ex officio* members of this body are the Prime Minister of Southern Rhodesia and the Governors of Northern Rhodesia and Nyasaland. Each of these appoints three more members from their territories to serve two-year terms. The Chairman is the Governor of Southern Rhodesia, Sir Campbell Tait. At the April meeting Sir Campbell warned the members against assuming that the Council was necessarily a prelude to amalgamation, though he did not exclude this as an eventual possibility.

Business conditions for the year were on the whole favorable. In Southern Rhodesia the gold premium tax was repealed in order to encourage the mining of low-grade ore. Cattle sales held up and the breed of stock was rapidly improving. Tobacco production in Rhodesia and Nyasaland was good. Local producers were worried by reports that the American Government was trying to get Britain to reduce the imperial preference on their product. It is the favored position in the imperial market that makes this African tobacco culture profitable; with even more protection they could increase production several-fold. The Rhodesian Corporation reported in September that it held 1,347,000 acres, having sold 52,785 acres in 1944.

In Northern Rhodesia possibilities were explored for reducing the colony's reliance on copper production, which accounted for 60 per cent of its total income. But more emphasis on farming and stock-raising opened up the problem of land and of the native's status on it. On June 19 there was held the first meeting of the Legislative Council with its newly created unofficial majority. This majority proceeded to vote against official proposals and to demand even greater self-government—which the government was bound to resist until native interests were better protected. Early in the summer the Paramount Chief of the Barotse, Yeta III, abdicated after 29 years of unswerving loyalty to the British Crown.

In Nyasaland it was found desirable to divide the unwieldy Northern Province and form a Central Province. There were thus three Provinces in all, each with its own African Council consisting of 20 chiefs and five other responsible Africans. From

the Colonial Development and Welfare Fund Nyasaland was granted £345,000 in order to finance a five-year plan for developing the Protectorate's meager educational facilities. In addition the sum of £130,000 was transferred from the Native Tobacco Board and appropriated for the creation of a Development and Welfare Fund with which to improve conditions among the natives.

Characteristics of the Population. The population of Southern Rhodesia was (1941) 1,448,000, of which 68,954 were Europeans; Northern Rhodesia (1943) 1,385,386 (18,745 Europeans); Nyasaland (1940) 1,685,045 (1,738 Europeans).

A large proportion of the natives, or Bantu, still live under tribal organization, a notable example being the Barotse of Northern Rhodesia. Increasing numbers, however, work at least part of the year in mines or in some other industrial enterprise. Many of the natives of Nyasaland migrate to the mines of the Rhodesias and of the Union of South Africa. Missionary work is carried on among the Bantu and increasing attention is being paid to African education. Recent figures give the number of schools for natives as: 1,457 in Southern Rhodesia, 902 in Northern Rhodesia, and 4,070 in Nyasaland, with a total of 400,000 pupils. The governments help support many of the schools run by missionaries. Educational opportunities for the European population are much more extensive and modern.

The Economy of the Country. The natives engage almost exclusively in pastoral and agricultural pursuits. In the Rhodesias they have been confined largely to "reserves." In Southern Rhodesia these amount to only one-fifth of the land once occupied by them. The British South Africa Company still holds some four million acres of land here, plus immense tracts in Northern Rhodesia. A million and a half acres of the best land in Nyasaland have also been alienated by European owners who have established tea, cotton and tobacco plantations. Tobacco is also an important product in Southern Rhodesia.

Northern Rhodesia produces large amounts of copper (nearly 300,000 long tons in 1943), cobalt, vanadium and zinc. In Southern Rhodesia gold, chromite and other minerals are mined in significant quantities. Bauxite deposits have been found both here and in Nyasaland.

An idea of the volume of trade can be gained from the following figures: exports—Southern Rhodesia (1940) £13,399,357; Northern Rhodesia (1943) £18,946,080; Nyasaland (1943) £1,379,401. The Rhodesian railway system (controlled by the British South Africa Company) has a trunk line running from the Union of South Africa to the Belgian Congo, with several branch lines, including one to Beira in Portuguese East Africa. The latter port is also connected by rail with the Nyasaland Protectorate. Northern Rhodesia's outlet to the Atlantic is via the Benguela Railway to Lobito Bay in Angola. In general the highways are few and poor in quality, while the rivers are largely useless for transport purposes. Small boats ply on Lake Nyasa.

ROBERT CALE WOOLBERT.

BRITISH EAST AFRICA. Under this collective heading are included KENYA (224,960 sq. mi.), the UGANDA PROTECTORATE (93,981 sq. mi.), TANGANYIKA TERRITORY (360,000 sq. mi.) and ZANZIBAR (1,040 sq. mi.)—making a total of 679,981 sq. mi. All border on the Indian Ocean except Uganda, which lies at the headwaters of the White Nile.

Government. Each of the four regions is governed

separately and differently. For several years, however, the European element, especially in Kenya, has been proposing the creation of an East African Dominion comprising Kenya, Uganda and Tanganyika. This proposal of "closer union" has been opposed by the authorities in London, who maintain *inter alia* that the rights of the natives would suffer under such a scheme. Since 1936 the money of the East African Currency Board has circulated in all four regions. The three mainland territories formed a postal and telegraph union in 1933.

Kenya consists of two parts: the Protectorate and the Colony. The former is the ten-mile strip along the coast (with certain islands) leased from the Sultan of Zanzibar. The rest forms the Colony. The Governor administers both Colony and Protectorate with the aid of an Executive Council, and legislates with the advice and consent of a Legislative Council. The latter consists of the following elected members: 11 by Europeans, 5 by Indians and one by the Arabs. Two are nominated to represent the interest of the African community, 11 are *ex officio* official members, not more than nine are nominated officials, including one to represent Arab interests. The small white minority thus possesses a highly disproportionate representation. Any attempt by the British Government to increase the representation of the natives, Arabs, or Indians is resented by the Europeans, who maintain that Kenya must become a "white man's country." The capital is Nairobi.

Uganda has quite a different arrangement. The province of Buganda is treated as a Kingdom over which rules a Kabaka assisted by three native ministers and a Parliament (Lukiko). There is thus a wide measure of native self-government, or "indirect rule." The nature of this arrangement was officially described in the House of Commons on March 14, 1945, as follows:

"It is the function of the Lukiko, as the Buganda Council is called, to discuss all matters relating to African administration and to frame laws for the Baganda. Resolutions and proposed laws are forwarded to the Kabaka, who is required to consult with the Governor of Uganda before giving effect to them, and to follow his advice. New laws have also to be approved by the Secretary of State. Subject to the Governor's approval, the Kabaka may appoint three Ministers—a Prime Minister, Minister of Justice, and a Minister of Finance. The Chief of each county in Buganda—20 in all—is also an *ex-officio* member of the Lukiko. In addition the Kabaka nominates three notables from each county—60 members." The rest of the country is under direct administration, though even here local chiefs and councils are given considerable leeway. The capital is Entebbe.

Tanganyika is a Class B Mandate and thus subject to the rules laid down by the League of Nations safeguarding native rights, the open door, etc. The Governor is assisted by Executive and Legislative Councils, but neither is in any way a truly representative institution.

The Zanzibar Protectorate comprises Zanzibar, Pemba and adjacent islands. There is a reigning Sultan, but the administration is directed by the British Resident.

Events, 1945. The problem of how to reintegrate the askari—the returning soldier who had fought in the Middle East and in Burma—into his African environment claimed the attention of all the colonial governments. Having seen the world and having acquired a new self-confidence, it was feared by some of the Europeans that he would not wish to return to his old status, or, in Kenya,

accept the color bar and other discriminatory practices. Some of the Africans had also learned trades and now aspired to go into business for themselves, thus competing with the Indians.

Cold water was thrown on the proposals for creating a "closer union" of Kenya, Tanganyika and Uganda when Sir Philip Mitchell, Governor of Kenya, declared on November 6 that he did not believe any such scheme was practical politics. Nevertheless the governors of the three mainland areas continued to meet in periodic conferences to discuss matters of common interest.

In Kenya for the first time in 22 years the Governor, in March, allowed the official members of the Legislative Council to vote freely, with the result that with one exception they supported a motion critical of the government. During the summer a proposal for decentralizing the government was accepted "in principle" by the Legislative Council but was opposed by the Indians, Arabs, and natives as not according them sufficient representation.

In Uganda a general strike was declared on January 15. The following days saw rioting in which eight Africans were killed and several wounded. The somewhat obscure causes of the trouble seemed to be mainly political—to force the young Kabaka to effect certain changes in his government. In July a report by the Chief Justice of Uganda, who had been appointed to investigate the troubles, suggested reforms, such as the alteration of the Constitution to allow direct representation of other educated Africans besides chiefs, and to include peasant representation.

On September 5 the Katikro (Prime Minister) of Buganda, Martin Luther Nsibirwa, was assassinated outside Kampala Cathedral. Elements whose power would be diminished by the impending reforms were suspected of having plotted this deed, as well as a *coup d'état* that never came off. A number of men charged with complicity, including several chiefs, were held for deportation. Before the young Kabaka left for England on September 24 to enter Cambridge University, he appointed three regents to serve in his absence. Late in October the Colonial Office announced that it had approved the appointment of three African members to the Protectorate Legislative Council in Uganda, something new for that body.

Characteristics of the Population. Native Africans constitute the overwhelming majority of the population, as is evident from the following figures: Kenya (1943 estimates)—3,591,624 natives, 30,765 Europeans, 55,795 Asiatics (mostly Indians) and 17,640 Arabs; Uganda (1944 estimates)—3,901,440 natives, 26,537 Asiatics, 2,747 Europeans; Tanganyika (1943)—5,355,786 natives, 16,709 Europeans, 45,099 Asiatics; Zanzibar (1931)—ca. 250,000, including 300 Europeans, 14,000 Indians and 33,400 Arabs.

The situation of the natives varies considerably. In Kenya they have been compressed into restricted "reserves" while the European settler has taken much of the best land in the temperate highlands. Exponents of the natives' point of view insist the areas allotted them are inadequate to supply a livelihood, thus forcing many to work for the whites under adverse economic and social conditions. During the last ten years nearly one-half of the soil in the reserves is reported to have been lost through erosion. The "color bar" is enforced and constitutes an added grievance.

In Uganda native interests generally come first, for there is no attempt to make a "white man's country" out of it as in Kenya. The mandatory

regime in Tanganyika is obligated to protect the interest and institutions of the natives. In Uganda and Tanganyika detribalization has not proceeded as far as in Kenya. Zanzibar is essentially a commercial center, where the population is a mixture of Negro, Arab, Indian and other elements. The same is true of some of the coastal towns of the mainland. The natives of Tanganyika are fairly homogeneous, racially speaking, but in Uganda and Kenya there are important Hamitic, Nilotic and Sudanese elements in addition to the Bantu. Swahili, the *lingua franca* of East Africa, is spoken on the coast in the port towns. In the interior paganism prevails wherever the natives have not been converted to Christianity. Missionary activities provide for most of the educational opportunities open to the African population. Figures illustrating native education are: Kenya, 2,646 schools; Uganda, 73,000 pupils; Tanganyika, 54,000 pupils; Zanzibar, 15,000 pupils. There are a few secondary schools, and at Kampala (Uganda) is Makerere College where higher learning is obtainable. The educational needs of the white population are given special attention and financial support.

Economy of the Country. In an area so vast and with such varied topography and climate, native occupations likewise vary. However, as elsewhere in Africa, stock-raising and primitive agriculture predominate. Where the native has forsaken these pursuits it is usually because the European has enticed him away from, or driven him off, the land. The small European population supervises the governmental apparatus and the large-scale economic enterprises, while much of the retail business is in the hands of Indians.

The commercially important products are evident from each area's principal exports: Kenya and Uganda—coffee, sugar, tea, cotton, hides and skins; Tanganyika—sisal, cotton, coffee, hides and skins, grain and copra; Zanzibar—copra and cloves (of which Zanzibar is the world's principal source of supply). The mineral resources of British East Africa are not fully explored or exploited, but tin and gold are mined in significant quantities. The forest resources are also considerable. Industry has barely made a beginning, and hence the chief imports are manufactured articles.

Exports and imports (by value) were respectively as follows: Kenya and Uganda (1943)—£9,898,453 and £12,904,974; Tanganyika (1940)—£5,641,520 and £3,000,939; Zanzibar (1943)—£1,137,321 and £1,216,238. The chief seaports are Mombasa, Dar-es-Salaam and Zanzibar. From Mombasa a railway runs through Nairobi to Kampala in Uganda (879 miles), and from Dar-es-Salaam another stretches westward to Kigoma on Lake Tanganyika (774 miles). Altogether there are some 3,000 miles of railway in British East Africa. Steamers operate on Lakes Nyasa, Tanganyika, Victoria, Kioga and Albert, and on the Upper Nile.

ROBERT GALE WOOLBERT.

BRITISH EMPIRE. The world's largest empire, comprising an area of 13,319,248 square miles and a population of about 555,793,786. It consists of:

1. The United Kingdom of Great Britain and Northern Ireland. See GREAT BRITAIN; IRELAND, NORTHERN.

2. Self-governing Dominions—AUSTRALIA, CANADA, NEWFOUNDLAND (temporarily administered by a Governor and Commission, responsible to the Crown through the British Secretary for Dominion Affairs), NEW ZEALAND, UNION OF SOUTH AFRICA.

3. EIRE (IRELAND), a sovereign, independent state, associated for certain purposes with the United Kingdom and the self-governing dominions, which are sometimes referred to collectively as the British Commonwealth of Nations.

4. INDIA AND BURMA.

5. Self-governing colonies—CEYLON and SOUTHERN RHODESIA.

6. Crown colonies and protectorates—ADEN, BAHAMAS, BARBADOS, BASUTOLAND, BECHUANALAND, BERMUDA, BRITISH GUIANA, BRITISH HONDURAS, BRITISH SOLOMON ISLANDS, BRITISH SOMALILAND, CYPRUS, DOMINICA, FALKLAND ISLANDS, FIJI, GAMBIA, GILBERT AND ELLICE ISLANDS, GIBRALTAR, GOLD COAST, GRENADA, HONG KONG, JAMAICA, KENYA, LEEWARD ISLANDS, MALTA, MAURITIUS, NIGERIA, NORTHERN RHODESIA, NYASALAND, ST. HELENA, ST. LUCIA, ST. VINCENT, SEYCHELLES, SIERRA LEONE, STRAITS SETTLEMENTS, SWAZILAND, TRINIDAD AND TOBAGO, UGANDA, ZANZIBAR.

7. Protectorates of a special nature—BRITISH NORTH BORNEO, BRUNEI, FEDERATED MALAY STATES, SARAWAK, UNFEDERATED MALAY STATES—collectively known as BRITISH MALAYA. Also TONGA.

8. Mandates held by the United Kingdom—BRITISH CAMEROONS, PALESTINE, TANGANYIKA TERRITORY, TRANS-JORDAN, TOGOLAND (British sphere).

9. Mandates held by Dominions—NAURU (Australia), NEW GUINEA (Australia), SOUTH-WEST AFRICA (Union of South Africa), WESTERN SAMOA (New Zealand).

10. Dependencies of Dominions—LABRADOR (Newfoundland); ASHMORE AND CARTIER ISLANDS, PAPUA, NORFOLK ISLAND, AUSTRALIAN ANTARCTIC TERRITORY (Australia); TOKELAU or UNION ISLANDS and Ross Dependency (New Zealand).

11. Territories held under condominium—ANGLO-EGYPTIAN SUDAN (United Kingdom and Egypt), NEW HEBRIDES (United Kingdom and France), CANTON and ENDERBURY ISLANDS (United Kingdom and United States).

See the separate articles on GREAT BRITAIN; the self-governing Dominions; EIRE; IRELAND, NORTHERN; INDIA; and BURMA.

The Dominions. The essential position of the Dominions was defined by the Imperial Conference of 1926 as follows: they are autonomous communities within the British Empire, equal in status, in no way subordinate one to another in any aspect of their domestic or external affairs, though united by a common allegiance to the Crown, and freely associated as members of the British Commonwealth of Nations. After technical changes were made the meaning of this declaration was incorporated in the Statute of Westminster, 1931, an act passed by the British Parliament.

In external relations the Dominions are in the same position as independent states, but they may if they desire make use of British diplomatic machinery. Practice in this respect varies. In regard to defense the autonomy of the Dominions is complete. In judicial matters the right to appeal from the final decision of the Dominion courts to the Privy Council rests on a Crown prerogative which has been in operation since the earliest days of colonial government. Here also practice varies, and it is clear that the appeal is retained only in so far as the Dominions desire. The immediate link between the British Crown and the Dominions is the Governor-General, but the interests of the respective territories are represented by High Commissioners sent to the Dominions by the United Kingdom and to the United Kingdom by the Dominions.

Events, 1945. A characteristic British Commonwealth meeting was held in London in April when Dominion and Indian representatives met for talks preliminary to the conference at San Francisco on the future world organization. The delegation leaders were as follows: Canada, Vincent Massey, High Commissioner in London; Australia, F. M. Forde, Deputy Prime Minister; New Zealand, Peter Fraser, Prime Minister; South Africa, Field Marshal Jan Smuts, Prime Minister; India, Sir Ramaswami Mudaliar, Supply Member of the Viceroy's Executive Council. At the close of the conference the Dominions Office issued a statement, approved by the delegates, endorsing the formation of a United Nations Organization and promising that each of the countries assembled in London would be represented at San Francisco.

Other conferences on matters of concern to the members of the Commonwealth were held in London in the course of the year. The rough outlines of a plan for pooling news and entertainment programs, staff and technical information on the United Kingdom, the Dominions and India was drafted at a Commonwealth broadcasting conference in March. An Empire wool conference in April and May resulted in a report and recommendations from the United Kingdom and all of the Dominions except Canada (which is less directly concerned with raw wool supplies), agreeing on a joint organization for the marketing of wool. The first full meeting of the British Commonwealth Air Transport Council in July drew representatives from all parts of the Empire. Most of the delegates remained in London for the plenary session of the International Committee on Air Navigation in August. The conference on the Empire telecommunications system was also in session in July.

Empire War Effort. The British Commonwealth and Empire's contribution to the war effort, as described in statistical terms by Herbert Morrison, Lord President of the Council, on Sept. 8, included 5,500,000 men in the armed services. Casualties, reported by Prime Minister Attlee in the House of Commons on Nov. 29, were 1,246,025, with British losses standing first, India's second and Canada's third. The number of killed was 353,652, wounded 475,070. The remainder were prisoners or missing. The Empire lost 610 ships with a gross tonnage of 1,120,000.

The Colonial Empire. The British Colonial Empire covers 2,215,000 square miles and has about 63,000,000 inhabitants. It includes 55 different areas of diverse sizes, climates and stages of development. All of these territories are free to trade with other countries besides Great Britain but the cost of their defense and development falls chiefly on British taxpayers. Approximately one-fifth of the colonial empire is administered under mandate from the League of Nations.

Colonial Development and Welfare. The Colonial Development and Welfare bill, providing a sum of £120,000,000 for the colonial empire over 10 years beginning in 1946, was introduced in the House of Commons in January by Colonel Oliver Stanley, Colonial Secretary, and speedily passed by the House. The amount provided annually was more than double that made available by the Colonial Development and Welfare Act of 1940. Expenditures from the fund were intended for the financing of development schemes which the colonies could later maintain from their own resources. In the administration of the fund the Colonial Secretary was to be assisted by Sir Frank Stockdale, recently appointed Adviser on Development Planning for the whole colonial empire.

In the House of Lords debate on the bill the view was expressed that the Colonial Office was not yet adequately staffed by administrators of sufficient experience in the preparation and execution of economic projects to carry out the now accepted policy of welfare and development. Opinions differed as to the kind of economic advisory or planning committee which should be developed.

Self-Governing Colonies. The colonies which are nearest to full self-government are Ceylon and Southern Rhodesia. Although the British Government is chiefly responsible for their defense and therefore retains control of their foreign policy, both govern themselves and therefore closely resemble dominions. Ceylon, an island south of India, is the smaller country, with an area of 25,332 square miles, but with the far larger population of 6,100,000. The capital and largest city is Colombo.

For Southern Rhodesia see **BRITISH EAST AFRICA**.

Constitution Offered Ceylon. Self-government on the British model, as a step to full dominion status, was recommended in the report submitted on October 10 by the Commission on Constitutional Reform in Ceylon under the chairmanship of Lord Soulbury. The report, made after a four-months' study in Ceylon by the members of the Soulbury Commission, recommended a parliament with two houses: a Senate of 30 members and a House of Representatives of 95 elected members plus 6 nominated by the Governor General. Until dominion status is attained the Governor General would keep defense and foreign affairs under his control and would appoint 15 of the 30 Senators.

The commission had been boycotted by Ceylon ministers. However, after the plan was issued as a White Paper on October 31 the ministers accepted the arrangement offered as a provisional step, although disappointment was officially expressed over deferring the admission of Ceylon to full dominion status. Vigorous differences of opinion in the various Ceylon communities, along the lines described in the White Paper, were soon apparent. Sinhalese thought the proposals did not go far enough and Tamils felt that they gave too much power to the Sinhalese majority. Strikes in transportation services handicapped Ceylon's industrial progress at the end of the year.

Life of the People. The people of Ceylon, 64 per cent of whom are Sinhalese, are for the greater part Buddhists. In 1942 there were 4,114 Sinhalese and Tamil schools with an attendance of 504,293. English and bilingual schools, the Royal College, the Government Training College, the Technical College and the University of Ceylon supplied other educational services.

The chief agricultural products are tea, rubber, copra, rice and spices. Livestock and minerals are also produced in some quantity. Textiles, rice, coal, sugar and manures are imported. Normally Ceylon's exports far exceed imports.

Other Colonies. The large number of other territories in the category of colonies have attained various degrees of political development. Those with the largest proportion of elected members in their legislatures are Bermuda, the West Indian islands of the Bahamas and Barbados, and British Guiana. Twenty of the remainder have legislatures partly elected and 17 have legislatures wholly nominated by the Governor.

British West Indies. Three important reports on the British West Indies were issued in London in the autumn of 1945: the full text of the reports of the West Indies Royal Commission of 1938-39, completed in December, 1939, but hitherto un-

published except for recommendations made public in February, 1940; a report on the action taken since on the recommendations; and Sir Frank Stockdale's report as Comptroller of Development and Welfare for 1943-44.

The reports gave a far from optimistic picture of the chances for immediate social advance; for, as Sir Frank Stockdale pointed out with great emphasis, the raising of the standard of living of the mass of the people must come before the West Indies can afford to assume a scale of expenditure on education, public health, housing, and other social services which has been only slowly reached in countries with national incomes many times greater per head of population.

Political federation of Britain's Caribbean colonies was proposed in the summer of 1945 by Oliver Stanley, Secretary of State for the Colonies, in a letter to their governors. The colonies concerned were the Bahamas, Barbados, British Guiana, British Honduras, Jamaica, the Leeward Islands, Trinidad and the Windward Islands, in some of which the United States has air and naval bases. Norman W. Manley, president of the National People's Party of Jamaica, endorsed the proposal in October, arguing that federation would have a salutary effect on the status of the Negro the world over and that it was not necessary to wait for self-government for each of the West Indies.

The Colonial Secretary's approval of the setting up of a university college in Jamaica, with a view to its full development as a West Indian university, was telegraphed to the West Indian colonies in September. The project was recommended by the Irvine Committee on Higher Education in the West Indies and endorsed by the Asquith Commission on Higher Education in the Colonies. The next step was to obtain statements of opinion and estimates of proposed contributions from the West Indian governments. A financial grant under the Colonial Development and Welfare Act was expected to help towards the cost of building.

The Anglo-American Caribbean Commission held a series of meetings in Washington in the latter part of July. The membership of the commission was increased in June by two members and a report on the Caribbean tourist trade was issued at about the same time.

Reform in Jamaica. Jamaica (capital, Kingston), with its area of 4,450 square miles, is the most important member of the British West Indian group. In 1945 Jamaica was living under the new constitution proclaimed on Nov. 20, 1944, for a period of five years. There is now a legislature of two houses—the House of Assembly, made up of 32 members elected by universal adult suffrage, and the Legislative Council of members nominated by the Governor. An Executive Committee is made up of 5 members elected by the House of Assembly and 5 nominated by the Governor. The Labor Party, which won the election in December, 1944, remained in power.

The lifting of wartime economic controls in Jamaica made slow progress in the autumn of 1945. The foreign trade of Jamaica continued extremely adverse, especially with reference to the United States. Controls of trade were continued, and an effort was made to balance trade between Jamaica and non-sterling countries as far as possible. It was announced at a meeting of the Jamaican Chamber of Commerce in Kingston on Oct. 10 that imports from sterling areas would be unlimited.

Economic Life. The 1,237,391 people of Jamaica

gain their living largely from the raising of sugar, bananas, coffee, rum and other agricultural products. Cotton piece goods and some foodstuffs have to be imported.

Other Caribbean Colonies. Bermuda has about 260 islands, of which 20 are inhabited. Civil population in 1940 was estimated to be 32,086 and the area is 19.3 square miles. During the war this colony was the location of bases for the British Navy, United States military and naval forces, and the Canadian Navy, and at all times it is a port of call on the New York-Lisbon transatlantic air route.

In the Bahamas group there are 20 inhabited and several uninhabited islands. Nassau is the capital of this colony whose area is 4,404 square miles and whose population was estimated to be 73,217 in 1942. Like Bermuda, the Bahamas cater to a large tourist trade, and engage as well in the production of shell, cascarilla bark, pine timber, sisal and crawfish. The colony of Barbados has a population of about 200,000 and an area of 166 square miles. Its products—sugar, molasses, rum, cotton and aloes—are typical of the West Indies.

The Leeward Islands constitute a federation of four presidencies: Antigua, Montserrat, St. Kitts-Nevis and the Virgin Islands. Total population of the colony was estimated to be 100,500 in 1943. The Windward Islands, also consisting of four islands, include Dominica, Grenada, St. Lucia and St. Vincent. Population is about 220,000 and the combined area of the four islands is 813 square miles.

Trinidad and Tobago form a united British colony near Venezuela which served during the war as a location of United States defense bases. Total area of the colony (with adjacent islands) is 1,980 square miles and total population is about 522,200, most of whom are West Indian natives of African descent.

British colonies in Latin America proper are British Honduras and British Guiana. Honduras, in Central America, produces mahogany, chicle, bananas, grapefruit, cedar logs, coconuts and copra. About 80 per cent of its exports come from the forests of the colony. Its area is 8,598 square miles, and its population is about 62,000. British Guiana is a much larger colony on the northern coast of South America. Its area of 89,480 square miles is inhabited by more than 360,000 people, almost half of whom are East Indians. Products of the colony are sugar, rice, coconuts, coffee, cacao, citrus fruits, gold and diamonds.

South Atlantic Colonies. Southernmost of all the dependencies in the British Empire is the colony of the Falkland Islands, located in the Atlantic opposite the southern tip of South America. Here, in an area of 4,618 square miles, is a population of only 2,435. The chief occupation of the people is sheep farming, except in the small dependencies of the colony where whaling is carried on. Across the Atlantic diagonally from the Falklands is St. Helena, a British colony west of South Africa whose dependencies are Ascension Island and the Tristan da Cunha group. In this instance, a population of about 5,000 is crowded into only 85 square miles. Capital of all the colony is Jamestown, and the chief export product is New Zealand hemp. In Africa proper is the British Gold Coast, a colony of 91,843 square miles with an approximate population of 4,000,000. Main products of this area are cacao, kola nuts, rubber, yams, gold, manganese, diamonds and timber.

Mediterranean Outposts. Gibraltar, between Spain and Africa, has long been called the "gateway of

the Mediterranean." A long mountain called the "Rock" is now separated from the mainland by a canal, but total area still amounts to almost two square miles. The chief occupation of Gibraltar's people is the supply of fuels and provisions to the extensive shipping trade carried on through the "gateway." Because of the colony's strategic position and its fortification as a naval base, 75 per cent of the people were evacuated during the war to Great Britain, Madeira and Jamaica. Another fortified naval base in the Mediterranean is Malta. Population of this colony is about 272,000, while total area is merely 124 square miles. Chief products are barley, wheat, potatoes, maize, oranges, figs, honey, grapes and cotton.

Colonies in the Indian Ocean. Mauritius and the Seychelles are British colonies east of Africa in the Indian Ocean. Mauritius, farthest south, has an area of 720 square miles and population of about 421,000. Sugar, copra, aloë fiber, tobacco and tea are produced. The Seychelles, farther north, consist of 92 islands whose area totals 156 square miles. A population of about 32,000 engages in the production of copra, cinnamon, essential oils, guano and fish.

Hong Kong. Hong Kong is a British crown colony near Canton in South China with an area of 391 square miles, comprising the island of Hong Kong, Old Kowloon and the New Territories leased from China in 1898 for 99 years. The British garrison in Hong Kong surrendered to the Japanese on Dec. 25, 1941. The port was reentered by the British on Aug. 30, 1945.

Prime Minister Attlee said in the British House of Commons on August 23, apparently with rumors in mind that the Chinese might install a military administration in Hong Kong, that "plans for reestablishing British administration in the colony were fully prepared." Cheers greeted the announcement and former Prime Minister Churchill reminded Attlee that at the Cairo Conference in 1943 the representatives of the British Government made it plain that they did not contemplate modification in the sovereignty of His Majesty's territories in the Far East. The reoccupation of Hong Kong proceeded as planned, although residents complained that adequate political and commercial authority was slow in appearing.

The civil population of Hong Kong in 1941 was estimated at 1,050,256, chiefly Chinese. Leading agricultural crops are rice, sweet potatoes, groundnuts, sugar cane and fruits; industries include shipbuilding, the manufacture of cement, and tin refining.

The Colony of Fiji. Fiji is a group of 250 islands east of Australia. Only 80 of the islands are inhabited yet population in 1943 was about 238,000. Total area of the island group is 7,088 square miles, and chief products are sugar, copra, bananas, pineapples, gold and forest products.

Colonies with Protectorates. Several British colonies include protectorates. Aden, in the southern tip of Arabia, is only 80 square miles in size, yet its protectorate has an area of 112,000 square miles. The colony of Aden itself has a population of about 49,000, most of whom are engaged in the production of salt, soap, cigarettes, dhows and cured fish. The colony is a fortified naval base and a free port and fueling station for ships. Kenya colony includes territories in the mainland of East Africa while its protectorate is the coastal belt of those territories which is rented from Zanzibar. Nigeria is a colony and a protectorate which includes the mandated British Cameroons. Far west of Nigeria is Sierra Leone, a colony and a protectorate.

Protectorates. Protectorates of the British Empire are those territories whose governments are in the care of Great Britain with or without the help of a local legislature. Basutoland, Bechuanaland and Swaziland, three territories in South Africa, are administered by one resident commissioner. Basutoland and Swaziland are small areas within the borders of the Union of South Africa, while the larger Bechuanaland lies just north of it. North of Bechuanaland is the protectorate of Northern Rhodesia. Other protectorates in the same section of Africa are Nyasaland, British Somaliland, Uganda and Zanzibar. Gambia, in West Africa, was at one time both colony and protectorate but is now wholly under the protectorate system.

Cyprus is the only British territory in the Mediterranean still under the protectorate system. Its area is 3,572 square miles, and population is about 384,000, most of whom speak a Greek dialect and profess the Greek Orthodox faith. Products of the island are wheat, barley, tobacco, olives, potatoes, raisins and wines.

Two British protectorates, the British Solomon Islands and the Gilbert and Ellice Islands, lie in the South Pacific. The Solomon Islands, situated east of New Guinea, have a land area of 11,000 square miles. Population was 94,105 in 1931, with almost all the inhabitants Polynesian or Melanesian. Chief products are mostly tropical. The Gilbert and Ellice Islands comprise the Gilbert, Ellice and Phoenix atolls and Ocean, Fanning, Christmas and Washington Islands. All of these except Ocean Island are of coral origin. Total population of this protectorate was estimated to be 35,000 in 1938, and its area is 216 square miles. All the islands produce coconuts and pandanus fruits, and Ocean Island has also rich phosphate deposits.

Protected States. Dependencies in the British Colonial Empire which are administered by the British in the name of local rulers include two areas. British North Borneo, Brunei, the Federated Malay States, Sarawak, the Straits Settlements and the Unfederated Malay States form the larger of these, British Malaya. These territories, situated southeast of Asia, have a total area of about 54,000 square miles. The largest city in British Malaya is Singapore.

Reform in Malaya. The British naval base of Singapore, which surrendered to the Japanese on Feb. 15, 1942, was reentered by Admiral Sir Arthur Power, Commander-in-Chief of the British East Indies fleet, on Sept. 3, 1945. The official surrender of southeast Asia took place on Sept. 12. The announcement of proposed constitutional changes followed.

A union of the Malay States, a step frequently discussed in Britain before the Japanese surrender, was proposed in the British House of Commons on October 10 by George Hall, Colonial Secretary. The plan included the establishment of a new Malayan citizenship for those born in the Malayan Union or who have long residence there. In due course the Malayan Union will be enabled to attain full self-government.

Such a change in protected states involves a complicated procedure. It requires fresh agreements with the sultans of the various federated and unfederated Malay states, so that the Crown can have full jurisdiction, after which the Malayan Union can be constituted by an Order-in-Council.

The whole of Malaya contains only three blocks of British territory—the settlements of Singapore, Penang (with province Wellesley) and Malacca. The rest of the country is composed of the four federated states of Perak, Pahang, Selangor and

Negri Sembilan, and the 5 unfederated states of Johore, Perlis, Kedah, Kelantan and Trengganu. Britain is pledged by treaty to uphold the position of the respective rulers. The position is further complicated by the presence of large numbers of immigrants, including more than 2,000,000 Chinese and 750,000 Indians. Malayan citizenship would provide a status for the Malayan-born Chinese whose race and religion prevent the sultans from acknowledging them as subjects.

The new proposal was known to involve difficult and delicate questions. It was not unexpected that questions soon arose, in Britain and in Malaya, as to whether the British Government intended to break faith with Malay rulers, especially in connection with the Treaty of Federation of 1895. Left-wing groups in Malaya, in which Chinese were influential, appeared to think in terms of a Malayan republic. British military activity in Indonesia further complicated the Malayan situation.

Revival of Commerce. Malayan rubber, the absence of which during the Japanese occupation had altered much of the economy of the United Nations, began to return to commerce in the autumn. The first shipment of 500 tons left Singapore on Sept. 18. By the end of November 25,000 tons of rubber from former Japanese stocks was on its way to the United Kingdom and the United States. Lack of labor and trained planters slowed the return to full rubber production. Tools and engineering equipment were required for the restoration of tin production.

At the time of reoccupation Singapore was found to be virtually undamaged, with its roads in good repair and its electric light plant working. After investigating the extent of destitution in the city the British military administration announced the introduction of unemployment benefits. Serious dock strikes in late October by Chinese and Indian workers were in protest against loading ships with ammunition for Indonesia.

Life of the People. The population of British Malaya at the end of 1939 was 5,444,833, with Chinese slightly more numerous than Malaysians. Indians were in the minority. The chief products were rubber, tin, copra, rice and palm oil. Exports, expanded by the inclusion of large amounts of rubber, were very large in 1940. They were valued at \$1,128,169,000, with \$591,931,000 going to the United States. Imports stood at \$830,591,100, but only a small amount was taken from the United States. (Figures are in Straits dollars, worth about one-half of the American dollar at that time.)

Protected State of Tonga. Tonga, a group of 150 islands and islets east of Fiji, is also a protected state. A population of about 34,000 natives inhabits this area of 250 square miles. Chief products are copra, bananas, citrus fruits, taro and fish.

Mandates. Mandates (ex-enemy territories administered for the League of Nations) form six of the territories in the British Empire. Palestine and Trans-Jordan in the Near East and the West African mandated areas of the British Cameroons, Tanganyika and Togoland are administered by Great Britain. Nauru, an atoll in the Pacific, is under Australia, New Zealand and Great Britain.

Palestine. Palestine, a former district of the Turkish province of Syria with an area of 10,429 square miles, has been under British mandate since 1923. Capital, Jerusalem. The territory is administered by a High Commissioner (Lieut.-Gen. Sir Alan Cunningham, appointed on Nov. 8 to succeed Field Marshal Viscount Gort, resigned because of ill health). The Jewish, Moslem and

Christian communities have autonomous control of their religious, cultural and communal affairs.

Events, 1945. British policy concerning Jewish immigration into Palestine was an increasingly controversial issue in 1945. The immediate background of the "Palestine Question" is in the British White Paper of 1939 setting the limit of Jewish immigration into Palestine at 75,000 Jews a year to Mar. 31, 1944. Jews entered Palestine at a slower rate, and the British Government extended the deadline to Mar. 31, 1945.

The World Zionist Conference which was held in London in August, 1945, made public its five-point program (laid before the British Government in the preceding May) which was addressed to the principal allies of the British Government and, in fact, to all of the United Nations. The program in summary was as follows:

1. Creation of a Jewish state in Palestine.
2. Settlement of as many Jews as possible in Palestine and the development of the country's resources.
3. An international loan to help transfer the first 1,000,000 Jews to Palestine.
4. Exaction of German reparations in kind for the rebuilding of Palestine.
5. Provision of international facilities for the exit and transport of all Jews wishing to settle in Palestine.

In comment on this program *The Times* (London) asked for a partition of Palestine, as recommended by the Royal Commission of 1938, in order to protect the political rights of the Arab community. *The Economist* (London) supported the proposal of Dr. Magnes, leader of the Ihud party in Palestine, for a bi-national state with equal political rights for both communities and the inclusion of Palestine in a federation including Syria, Lebanon and Trans-Jordan.

President Truman addressed a letter to Prime Minister Attlee on August 31 on the subject of increased Jewish immigration into Palestine. While conversations between the two governments were going on, the 28th anniversary of the Balfour Declaration (promise by Lord Balfour, British Foreign Secretary, November, 1917, that Britain would provide a "national home" for Jews in Palestine after the war) was marked by an outbreak of violence by Jews in Palestine in early November. On Nov. 13 came the publication of an agreement between the governments of the United States and Great Britain to establish a Joint Committee of Inquiry into the whole problem of European Jews and Palestine and to continue Jewish immigration at the rate of 1,500 a month.

Both Jews and Arabs showed dissatisfaction with the announced program, and rioting in the all-Jewish city of Tel-Aviv continued. When the new High Commissioner, Sir Alan Cunningham, reached Palestine on Nov. 21, Tel-Aviv had become quieter. The Arab League's reply to the British announcement of the proposed Joint Committee of Inquiry, published on Dec. 6, criticized the Zionist attempt to force a Jewish majority in Palestine and asked the democracies, including the United States, to accept voluntary Jewish immigrants. On Nov. 30 it was learned in Jerusalem that after the end of 1945 the British Government intended to withdraw its subsidy to 2,000 Polish Jews who have been supported in Palestine since 1941 at a cost of more than \$3,000,000, since they had signified their wish to become permanent residents of Palestine. Payments to 4,000 others who wished to return were to be continued.

The People. The estimated population of Palestine in 1942 was 1,605,816, including 987,985 Moslems (mostly Arabs), 478,449 Jews, and 126,344 Christians (including some Arabs). In 1918 there were only about 50,000 Jews in Palestine. The increase of the Jews from 7 to 30 per cent of the population has been due mainly to immigration, as the fecundity of the Arabs is greater. Education in Palestine is not compulsory.

Economic Life. Agriculture supports more than one-half of the population, although manufactures have in recent years exceeded agricultural products in value. Citrus fruit is the chief crop, followed by wheat, corn, barley, olives, tobacco, corn and rice. The principal manufactures include clothing, textiles, leather, timber, food products, soap and wine. In recent years imports have greatly exceeded exports, in part because of the need of the expanding Jewish community for supplies for its new and partly-developed projects. The chief countries with which trade is carried on are Great Britain, Egypt, the United States, Syria and Turkey. In 1942 imports stood at £19,504,103 and exports at £3,061,828.

Other Mandates. Trans-Jordan, an Arab country in western Asia, was mandated to Great Britain with Palestine in 1923. Its area is 34,740 square miles, and present population is estimated to be 350,000. Principal occupations of the country are stock raising and primitive agriculture. Wheat, barley, tobacco, phosphate and potash are produced, and a limited trade is carried on with Palestine and Iraq. Smallest of the British mandates is Nauru, an atoll in the Pacific controlled by Great Britain, Australia and New Zealand since 1920, except during the period of Japanese invasion. The area of Nauru is 8.22 square miles. Its population (2,672 in 1942) is made up of Nauruans, Chinese, Europeans and other Pacific islanders. The chief product of the territory is phosphate.

Condominiums. Condominiums of the British Colonial Empire are those territories jointly administered by Great Britain and other countries. The Anglo-Egyptian Sudan, a British-Egyptian condominium, is administered by a Governor General appointed by the King of Egypt with the approval of Great Britain, with native authorities in charge of local affairs. The territory is 967,500 square miles, with a population of about 6,590,996 Arabs, Negroes and Europeans. Principal crops are great millet and cotton, and 80 per cent of the world's supply of gum arabic is produced in the Sudan.

Similar to the Sudan in type of dependence but jointly controlled by Great Britain and France are the New Hebrides, a group of islands in the South Pacific. Total area of the islands is 5,700 square miles, and population in 1941 was 43,130, most of whom were natives. Chief products are copra, cacao, coffee and vanilla.

The Canton and Enderbury Islands form a third condominium whose administration is shared by Great Britain and the United States. The more important of the two islands is Canton, which served during the war as an important link in the air transport route to battle fronts of the southwest Pacific and as a base for air patrol operations.

ALZADA COMSTOCK.

BRITISH HIGH COMMISSION TERRITORIES IN SOUTH AFRICA.

The areas of these three native Territories adjacent to the Union of South Africa are: Basutoland, 11,716 sq. mi.; Bechuanaland Protectorate, 275,000 (approx.) sq. mi.; Swaziland, 6,705 sq. mi.

Government. They are under the general supervision of a High Commissioner who is also the High Commissioner for the United Kingdom in the Union of South Africa. There are Resident Commissioners in each of the Territories. The Territories are under the control of the Dominions rather than the Colonial Office.

Basutoland consists entirely of a native reserve, with a European population of less than 1,600 out of a total of 660,000 inhabitants. The government is monarchical and aristocratic, under a single Native Authority, of which the executive and judicial functions are exercised by a Paramount Chief, or at present by a Regent. Basutoland is a crown colony, having been annexed in 1871. The capital is Maseru.

Bechuanaland is a protectorate containing eight separate Native Authorities, each with its own governmental apparatus and financial system. The Native Advisory Council is attended by the eight Chiefs but has no executive functions. The administrative capital is at Mafeking (Cape Province). In addition to the land reserves of each of the eight tribes, there are several areas owned by European cattle-raisers. Europeans number less than 2,000 out of the population of 270,000.

Swaziland has some 160,000 inhabitants, of which 2,700 are Europeans. Yet only one-third of the country is native reserve, the rest being the property of Europeans. The Paramount Chief shares executive and judicial functions with the Resident Commissioner. The Swazis are a backward people and unlike the Basuto and Bechuana are not Christians. Mbabane is the capital.

Events, 1945. The Union of South Africa continued to press the British Government to cede the three Territories. This campaign, which had been going on for many years, has been resisted in Britain by those who feel that the Union's native policy is too harsh and unenlightened, and that Britain would therefore betray her trust toward the inhabitants of the Territories by surrendering them to South African rule. The South Africans point out, by way of proving their case, that the Territories are already almost wholly dependent economically on the Union, with which in fact they are joined in a Customs Union.

Among the Africans serving in Italy early in 1945 were 20,000 from Basutoland, over 9,000 from Bechuanaland, and 3,500 from Swaziland.

A scientific expedition, led into the Kalahari Desert of northern Bechuanaland during the winter of 1945 by Senator E. A. Conroy, Union Minister of Lands, demonstrated that there were possibilities of canalizing swamps and irrigating large areas in that arid region.

The People and Their Economy. The Basuto live in a highland area with considerable rainfall (snow in winter) and produce sheep, some cattle, wheat and other grains. In 1943 they exported 7,321,667 lbs. of wool to the Union. Their living and health standards are high for Africa, they are educationally advanced, and many of the young men work in factories and mines in the Union. The government has a sizable surplus and no debt.

In Bechuanaland rainfall is deficient, temperatures are high, the soil is poor, and the people and government are consequently poor. Malaria, sleeping sickness and cattle diseases abound. There are no secondary schools. The Bechuana, who still live in a tribal state, largely follow pastoral pursuits. It is estimated that they own over 800,000 cattle and 550,000 sheep and goats. Yet despite their handicaps the Bechuana are making progress.

Swaziland is the least advanced of the three—

hot, wet, malarious and poor. The inhabitants are almost wholly uneducated and their government balances its budget only with help from the British taxpayer. Unlike the Basuto and the Bechuana, the Swazi still dress in the ancient native fashion. The native economy rests largely on cattle-raising.

ROBERT GALE WOOLBERT.

BRITISH WEST AFRICA. Under this heading are grouped four non-contiguous areas lying along the west coast of Africa from the Bight of Biafra almost to Cape Verde. The major political divisions comprising British West Africa are: Gambia, 4,068 square miles; Gold Coast, 91,843 square miles (including Togoland, 13,041 sq. mi.); Nigeria, 372,599 square miles (including British Cameroons, 34,081 sq. mi.); and Sierra Leone, 27,925 square miles.

Government. The constitutional arrangements in the various part of British West Africa run a wide gamut.

Nigeria consists of a Colony (a small area around Lagos) and a Protectorate, divided into Northern, Eastern, and Western Provinces. In addition, the British mandated territory in the Cameroons is treated administratively as a part of Nigeria. The Governor is assisted by an executive council containing both official and unofficial members. Legislation for the Colony and the Eastern and Western Provinces of the Protectorate emanates from the Legislative Council, the members of which are partly elective and some of whom are Africans. Laws for the Northern Provinces are made by the Governor.

In the Protectorate, notably in the Moslem Northern Provinces, a wide degree of "indirect rule" is practised, having originally been introduced in Nigeria by the late Lord Lugard. Native sultans, chiefs and other hereditary rulers thus carry on much of the work of government at the local and provincial levels. Many Africans are employed in the colonial administration and judicial service, and some of them rise to high office. Lagos is the capital.

Gold Coast consists of a Colony, Ashanti and the Northern Territories. The British mandated zone in Togoland is united administratively with the Gold Coast. In the Colony the Governor is assisted by Executive and Legislative Councils. Under the terms of the new constitution the latter should contain six official members, nine elected provincial members, four members chosen by the Ashanti confederacy council, five municipal members and six members nominated by the Governor. There is thus an unofficial majority. The Governor will continue to legislate for the Northern Territories.

Ashanti and the Northern Territories are administered by Chief Commissioners, with wide local powers left to the chiefs and their councils. The Africanization of the administration and judicial services, as in Nigeria, proceeds apace. Accra is the capital.

Sierra Leone and Gambia each consist of a small Colony around the capitals (Freetown and Bathurst, respectively) and much larger Protectorates in the interior. In both cases the Executive and Legislative Councils contain official majorities. There is African representation but these bodies have only advisory powers.

During the war the British Government appointed a Resident Minister in West Africa, whose function it was to coordinate political and economic affairs in this strategically vital part of the empire. It is widely felt that this pattern of co-operative effort should be continued and strength-

ened in the future. There is already in existence a West African Currency Board and a uniform monetary system.

Events, 1945. The experiment of closer wartime cooperation between the colonies under a Minister Resident proved the worth of a permanent body to carry on this work. The Secretary of State for Colonies, Mr. George Hall, declared in the House of Commons on October 17 that a West African Council consisting of the four Governors was to be established with its center in the Gold Coast. One of the most urgent problems confronting all the colonies of West Africa was the reintegration of some 200,000 soldiers who had fought in the Burma and other campaigns.

In Nigeria the outstanding political event was the publication of a White Paper containing proposals for a revised constitution prepared by the Governor, Sir Arthur Richards. The latter stated that the problem of Nigeria was to create a political system which is itself a present advance and contains the living possibility of further orderly advance. His recommendations provide for a widening of the scope and membership of the Legislative Council and the creation of regional councils in each of the three provinces of the Protectorate.

The reformed Legislative Council would have 20 official and 29 unofficial members, and an African majority of 25 to 24. It would legislate for the country as a whole and all of Nigerian affairs would be subject to its purview, including the Northern Province. This instrument would be in force for nine years, subject to review at the end of that time. The debate on these proposals in the Legislative Council on March 23 showed the unofficial members generally favorable. However, protest meetings indicated that public opinion was far from single-minded on the subject.

On June 22 a general strike was called in Nigeria, contrary to the advice of union leaders. It dragged on until August 4, when new leaders persuaded the men to return and discuss the issues with the government. In this discussion the authorities made it clear that no obstruction would be put in the way of developing trade unions.

During the year plans for a £40,000,000 program of general development in Nigeria over the next decade were elaborated. The cost of this was to be borne partly by the colony and partly by the Colonial Development and Welfare Fund. Lesser sums were to be spent on similar programs in the smaller colonies.

In the Gold Coast, the world's greatest supplier of cocoa, the subject of how that crop was to be controlled created an international problem. The American importers objected to the control scheme proposed by the Churchill government, especially its price features. The proposal was never put into effect.

When the Labor Party took over in August, renewed anxiety was expressed by both foreign importers and the native growers in West Africa. In September the British Government was reported to have decided to buy the 1944-45 crop through the West African Produce Control Board, but at a higher price. Still the growers objected and sent a delegation to London, while the president of the Cocoa Exchange in New York assailed the manner in which Great Britain was said to be holding up cocoa shipments.

Population. Nigeria is the most populous of all the British crown colonies, with over 21,000,000 inhabitants, plus nearly 900,000 in the mandated territory of the Cameroons. The Gold Coast con-

tains over 3,500,000, together with 400,000 in Togoland. In Sierra Leone there are 1,850,000 inhabitants, and in Gambia 200,000. This makes a total of nearly 28,000,000, of whom only a fraction of one percent are Europeans. This is definitely Black Africa, most of the natives being Sudanese Negroes.

The manner of life depends largely on the climate. The southern parts of Nigeria and the Gold Coast are characterized by heavy rainfall. The natives here are pagans, except those that have been Christianized; and the advent of the European has tended to break down tribal organization. North of the rain forest lies the more open Sudan country where Islam is the religion professed by most of the people. The political institutions and cultures of these kingdoms, sultanates and the like have proved more resistant to change than those of the coast Negroes.

Sierra Leone and Gambia have a few coastal centers—Freetown's population is nearly 100,000—but the inhabitants of the interior have been touched only lightly by European ways.

Education. Educational opportunities vary widely. Many of them are afforded by missionary schools, sometimes assisted by government subsidies. The Christian missionaries find in the Moslems very real competitors for the allegiance of the remaining pagans. Christian missions also provide various health and social services as well as schools. A relatively small part of the population receives any but the scantiest schooling, and more emphasis on secondary and technical education is a great need in British West Africa.

Education of college grade is obtainable at Fourah Bay in Sierra Leone (affiliated with the University of Durham), Achimota in the Gold Coast and Yaba in Nigeria. Several proposals have recently been made for the creation of a West African university, either by the association of the existing colleges or by establishing a wholly new institution, probably in Nigeria.

Economy. One of the notable features of native agriculture in Nigeria and the Gold Coast is the large number of native cultivators of cash export crops, particularly cocoa and palm oil and kernels. The Gold Coast produces over 40 percent of the world's cocoa, largely on small peasant farms of less than five acres. The export business has, however, been in the hands of European companies, and this has caused much friction. Likewise in Nigeria much of the cocoa, palm products, peanuts, cotton, etc., is produced by natives on small tracts. Critics have pointed out that, however desirable this form of production may be for social reasons, it cannot compete successfully against the plantation-grown produce of such places as the Belgian Congo, Malaya, and the Dutch East Indies.

The coastal forest belt is not suitable for livestock, because of the prevalence of the tsetse fly. But on the northern plains domestic animals can be raised with considerable success, and horses are a common sight there. In the forests are found valuable woods like mahogany and cedar. The cultivation of cereals is suited to the drier northern regions, as is peanut and cotton culture. The principal export crop of Gambia is peanuts and of Sierra Leone palm kernels.

The mineral output of these colonies is far from negligible. The Gold Coast is an important producer of diamonds, gold, and manganese ore. Nigeria's mineral exports include tin ore, gold, and coal. Sierra Leone produces small quantities of iron ore and gold.

The relative importance of British West Africa

in world trade will be seen from the following figures: Gambia (1941)—imports, £503,303, exports £290,087; Gold Coast, including Togoland (1943)—imports £7,680,000, exports £11,880,000; Nigeria (1942)—imports £9,700,000, exports £13,700,000; Sierra Leone (1941)—imports £3,814,391, exports £1,592,608. These statistics do not by any means accurately reflect the total production of the colonies, particularly Nigeria, which has a large internal trade. As in the case of all raw material producing countries, the chief imports are manufactured goods and certain foodstuffs (rice, sugar, fish, salt) not obtainable locally.

In normal times British West Africa is served by the shipping lines of many countries. The principal ports are Lagos, Port Harcourt, Takoradi, Freetown (much used for naval purposes during the war) and Bathurst. Nigeria has some 2,500 miles of railway, the Gold Coast nearly 900, and Sierra Leone over 300. Road conditions vary, but in general they can be said to have improved considerably under the impetus of war necessity. Before the Mediterranean was opened in 1943 to Allied shipping, Britain and the United States, working together, built airports and other facilities in West Africa and the Sudan so that high priority material and persons could be transported quickly to the Middle East and India-Burma-China theaters.

ROBERT GALE WOOLBERT

BROOKINGS INSTITUTION. A non-profit corporation devoted to research and training in economics and government. In 1945 the institution conducted a program of research dealing with both domestic and international problems. Research fellowships, which were discontinued at the outbreak of the war, have not been resumed, but it is expected that they will again be granted in 1946. The income of the institution is derived from grants from foundations, its own endowment, and the sale of publications.

Publications resulting from its research program in 1945 included the following: *International Tribunals: Past and Future*, by Manley O. Hudson; *Labor Policy of the Federal Government*, by Harold W. Metz; *Postwar Fiscal Requirements*, by Lewis H. Kimmel and associates; *Debtor and Creditor Countries, 1938-1944*, by Cleona Lewis; *Should Price Control Be Retained?* by Harold G. Moulton and Karl T. Schlotterbeck; *Business Leadership in the Large Corporation*, by R. A. Gordon.

The home of the Institution is situated at 722 Jackson Place, Washington, D. C. Its officers for 1945-46 were: Chairman, Dwight F. Davis; Vice Chairman, Dean G. Acheson; President, Harold G. Moulton; Vice President, Edwin G. Nourse; Treasurer, Henry P. Seidemann; and Secretary, Elizabeth H. Wilson.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES. One of America's oldest and largest institutions for informal education, located in Brooklyn, N.Y. Its public activities are conducted at four centers: The Department of Education at the Academy of Music, the Central Museum, the Children's Museum, and the Botanic Garden. Founded in 1824, the Institute was incorporated in its present form in 1890. Total membership is about 5,000 and is open to everyone.

The Department of Education at the Academy of Music presents an adult education program annually of concerts, lectures, forums in every major field of the arts and sciences. Approximate attendance at these events for the season 1944-45

was 250,000. The Institute's Museums possess collections in art, ethnology, and natural science. During 1941, the Art and Photography Classes formerly conducted at the Department of Education at the Academy of Music were transferred to the Brooklyn Museum to form the new Art School of the Brooklyn Museum. Attendance at both Museums for the year 1945 totalled 515,358. The Institute's Botanic Garden comprises more than 50 acres and plant houses containing tropical and sub-tropical species. Botanic Garden attendance during 1945 totaled 1,201,417.

Mr. Edward C. Blum is Chairman of the Board of Trustees and Mr. Adrian Van Sinderen President of the Brooklyn Institute. Julius Bloom is Director of the Department of Education, Mrs. Laurance P. Roberts, Director of the Brooklyn Museum, and Dr. George S. Avery, Jr., Director of the Botanic Garden.

BUDGET, Bureau of the. A division of the Executive Office of the President, transferred from the Department of the Treasury in 1939, which assists the President in the preparation of the Budget and the fiscal program of the Government. Its chief branches pertain to Legislative Reference, Estimates, Administrative Management, Statistical Standards, and fiscal programs (the Fiscal Division). Special activities at the present time include the War Projects Unit, which reports upon all war construction projects and makes recommendations toward increased efficiency and economies, the Committee on Records of War Administration, and the Equipment and Supply Section, which surveys supplies in government agencies and assists in the redistribution of surpluses. Director: Harold D. Smith.

BUHL FOUNDATION. A foundation established in 1928 by Henry Buhl, Jr. Capital assets were \$12,502,314 in 1945, and expenditures for the year totaled \$189,632. The Foundation's programs center in the Pittsburgh area, where it has sought to provide more adequate factual bases for social work and regional economic effort, to promote research in public health and the natural sciences, and to develop the community's resources in higher education. Another objective is the advancement of housing standards for American cities, as exemplified in large-scale, planned communities administered on a long-term investment basis. In demonstration of this last-named objective, the Foundation operates Chatham Village in Pittsburgh, built in 1932 at a cost of \$1,700,000. The Buhl Planetarium and Institute of Popular Science was built at a cost of \$1,100,000 in 1939 as a gift to the people of Western Pennsylvania. Director: Charles F. Lewis. Offices: Farmers Bank Building, Pittsburgh 22, Pa.

BUILDING. Although the United States has not experienced the wholesale destruction of buildings which other war countries have suffered, there is still a great need for vast numbers of new buildings of every kind. This need has not been met adequately, and even with war restrictions relaxed or cancelled, actual construction has continued far below requirements. This results from shortage of men and materials, price regulations, labor troubles, difficulties of finance, and tardiness in completing plans and preliminaries for placing contracts. Structures needed include factories and industrial buildings, public buildings, hospitals, churches, schools, apartments, and various institutional buildings.

Residential buildings and housing projects form a special problem, but relief from the shortage of civilian accommodations will be slow, and will depend largely upon prices and the availability of men and materials. One result of the shortage is the increasing practice of converting one-family residences to accommodate two or more families. With peace established, the National Housing Agency abandoned its war program and concentrated upon the serious problem of civilian housing, particularly for men discharged from the military forces. Mass construction has not reached large proportions, and there are too many individual designs in proportion to the number of buildings erected. For temporary relief, authorities have planned to use a number of war units, both for domestic use and for export, but knock-down or prefabricated buildings are not always satisfactory.

Many new ideas and materials, developed under war conditions, include structural members of light pressed-steel shapes, laminated wood, and precast concrete; also panels of steel, aluminum, plywood, plaster, asbestos and concrete; and thin-shell concrete for domes and roofing. Glass blocks have become established among building materials, and have been recommended as substitutes for windows in factories and railroad engine houses where smoke and fumes corrode steel and wood framing. The U. S. Army has built a number of one-story steel prefabricated warehouses, 20 x 100 ft., and in the Philippine Islands, several one-story 1,000-bed hospitals having pressed steel frames and steel sheathing.

There is some advance in standardizing the dimensions of building materials, both to reduce the number of sizes and to eliminate the excessive and wasteful cutting and fitting at individual buildings. This movement has expanded into what is termed "modular" design, in which a complete structural unit (comprising perhaps a wall, pier and window) may be repeated to form a building of any desired size. The aim is to economize in time and cost of design and construction.

Municipal building codes hamper progress, in many cases, through being old and failing to provide for modern materials and advancing knowledge, while various other interests oppose modernization. Some States (including Wisconsin, Indiana and Ohio) have State building codes, and this idea is spreading, as a means of reducing construction costs. A general revision of building codes has been recommended by the U. S. Chamber of Commerce, and the National Fire Protection Association. The Pacific Coast Building Officials Conference has a uniform code (1943) in use in 375 cities, and its use is spreading to the mid-west. It is to be revised in 1946. The slum area is a factor affecting building developments in many cities, and St. Louis has an anti-slum committee to plan the rehabilitation of blighted areas.

Tall buildings of the "skyscraper" type are infrequent, but Rockefeller Center, in New York, is to have a 33-story office building. That city is also to have a 32-story concrete structure for warehouse and manufacturing purposes. A curious feature will be a 30-ft. driveway of 6% per cent grade extending to all floors for the use of motor trucks and built around a court 200 ft. square. Some housing projects plan buildings of 10 to 15 stories.

The question of what would happen to tall buildings in case of bomb attack was answered in part in New York on July 28, when a 10-ton Army bombing plane, lost in a fog, struck the 102-story steel-frame Empire State Building at the 78-79th story level at about 250 miles an hour. Several

persons were killed. Fire was started by the high-octane gas of the plane, but the fire department had it out in 40 minutes. A steel column at the point of impact was not damaged seriously, and other structural damage was slight. Flying fragments cut the elevator cables. However, the case is not directly comparable with that of bombs falling upon a building, as in war-wrecked cities of Europe.

Earthquake shocks and vibrations had to be considered in designing the Tripler Hospital of the U. S. Army in Hawaii, a multi-story structure providing 2,000 beds. All column foundations were tied together for uniform action and the superstructure was divided into 12 sections by vertical joints to provide for varying deflections under earthquake forces. Three great timber hangars, 1,058 x 240 ft. in plan and 171 ft. high, of the U. S. Navy at Richmond, Florida, were wrecked in the September hurricane and then destroyed by fire.

Moving residences to new and distant locations is a special class of work, illustrated by the moving of 109 two-story timber dwellings for industry employees from Ravenna, Ohio, to Detroit, a distance of 260 miles. Sectionalized and taken apart into some 600 units, all match-marked for reassembling, they were carried by motor trucks and trailers. Several hundred new buildings of a Federal housing project at Windham, Ohio, were moved to Columbus for the use of servicemen with families. Several structures of a housing project at Vanport, Oregon, were cut apart and transported by motor trucks to the Navy Yard at Bremerton, Wash. In abandoning Camp Hale, in Colorado, the wood buildings were taken down by German prisoners, the roof trusses, hardwood floors and other parts being salvaged.

The lack of housing accommodation and even shelter throughout Europe is a most serious problem and its solution is far from being effected. In Britain, numbers of emergency buildings are being composed of light steel welded frames sheathed with panels of asbestos, cement or concrete. But where there were normally about a million building workers, there are now 400,000 such men. A portable hangar has been devised, in which each frame consists of two vertical legs in the walls, while two inclined legs form the roof. Reinforced concrete for skyscrapers and other large buildings is being used extensively in some cities of South America, and a study of this development shows marked differences from practice in the United States. In South Africa, the government is building some 6,000 houses for returning veterans. (See ARCHITECTURE.)

E. E. RUSSELL TRATMAN.

BULGARIA. A Balkan kingdom in southeast Europe. Ruler: King Simeon II (born June 16, 1937; ascended the throne on Aug. 28, 1943). Total prewar area: 39,825 square miles. Population (estimate of Jan. 1, 1940): 6,308,000. Chief towns: Sofia (capital) 401,300 inhabitants in 1942, Plovdiv (Philippopolis) 113,000, Varna 78,000, Ruse (Ruschuk) 52,000, Burgas 41,000. Vital statistics (1943), based on prewar boundaries: living births, 21.1 per 1,000; deaths, 14.2; marriages, 12.5; infant mortality, 144 deaths under one year per 1,000 live births.

Education and Religion. In 1938-39 there were 252 kindergartens with 12,702 pupils, 4,743 public elementary schools with 596,111 pupils, 2,044 secondary schools with 360,786 pupils, and one State University (at Sofia) with 6,030 students.

The American College at Sofia, with about 400 students, was closed Sept. 12, 1942. The 1934 census showed 5,128,890 members of the Orthodox Church of Bulgaria, 821,298 Moslems, 48,398 Jews, 45,704 Roman Catholics, 23,476 Armenian-Gregorians.

Events, 1945. Bulgaria's problem in 1945 was to advance as far as possible along the road to renewed sovereignty after its defeat as an Axis satellite and its occupation by Russian armed forces. Final authority was vested in an Allied Control Commission with British, American, and Russian representatives, but the Russian factor was dominant and the occupying troops were Russian. The presence of foreign controls naturally affected the political life of the country and was paramount in international relations, but the internal political scene presented at least the appearance of uncontrolled competition, with the presence of an occupying power manifested only in the greater assurance and vigor of the party which that power favored. Sovereignty was theoretically vested in a Regency, acting for the King during his minority, and government was in the hands of the Fatherland Front, a coalition of parties which had participated in the resistance to the German suzerainty, comprising the National Agrarian Union, Zveno, Communists, and Social Democrats. Among the parties the political activity of the year centered on the efforts of elements sympathetic to the Communists or to Russia (not necessarily identical) to gain control of the disparate parties and so of the Fatherland Front, the ultimate aim being that the Fatherland Front with complete pro-Communist and pro-Russian coloring should prevail at the national elections, which were held, after delays, on Nov. 18, and so legitimize itself as the recognized government of Bulgaria and obtain foreign recognition as such. The devices by which the Fatherland Front succeeded in overcoming its opposition and achieving success at the polls were questioned with varying degrees of disapproval or indignation by friends of the opposition within and without Bulgaria, but it appears that the Fatherland Front government and its Soviet sponsors sought to conform to normal political practices and to preserve the forms of democratic procedure, according to the Slavic concept. It is probable that the final solution, though not representing the degree of unanimity which the balloting might suggest, did in fact represent the will of the majority of Bulgarians. Opposition organs did not enjoy the freedom accorded to the opposition of the British-sponsored governments in neighboring Greece, but foreign criticism of Russian pressure upon internal Bulgarian affairs was disarmed when the British found themselves constrained to intervene directly in the formation of a Greek government late in November.

The tactic by which opposition groups were neutralized followed a regular pattern. In each party a dissident group under a leader more sympathetic to the Russians and Communists arose and in course of time gained ascendancy. Thus on Jan. 21 Dr. Georgi M. Dimitrov (not to be confused with the Bulgarian Communist leader of the same name), who had a record of pro-British sympathies and services and had been protected by Britain during his exile (February, 1941, to September, 1944), resigned as secretary of the National Agrarian Union and was succeeded by Nikola Petkov, who seemed more contented with the lesser role the Agrarians were playing in the Fatherland Front. By May 23 agitation against

Dimitrov as an agent of reaction had become so threatening that Dimitrov sought asylum first in the home of a British official and then an American. But Petkov, though less distasteful to the Communists and Russians, still diverged too sharply from their interests, and so a dissident group arose under Alexander Obbov, which in time dominated the party. In a parallel development in the Socialist Party Dimitar Neikov played the role of Obbov. Among various organizations not primarily political an effort was made to consolidate those of parallel interests and give the dominant position to the group sympathetic to the Communists. This maneuvering had in view a Communist victory in the elections, which constituted the focus of political interest during the year. On February 18 Minister of the Interior Anton Yugov (Communist) promised that elections would be held soon, and on April 13 he promulgated the draft of his electoral law. This provided that (1) voting for deputies should be direct, free, and secret; (2) the franchise was to be exercised by all over 18 regardless of sex, nationality or religion; (3) the proportional electoral system was to be employed; (4) the opposition might participate and submit lists of candidates; (5) trade organizations, unions, cooperatives, or any group of ten voters might put up their own candidates; (6) only individuals of proven fascist sympathies would be deprived of the right to vote. With undisputed control over the Fatherland Front, the General Workers' Trade Union, the active Women's Union, and the Sports Federation, the position of the Communists was strong, and with a single ticket offered by the Fatherland Front instead of separate tickets offered by its components there could be no doubt that they would win. In a speech on July 1 Foreign Minister Petko Stainov, himself a Zveno man, declared the election must be a plebiscite for or against the Fatherland Front. A day would come, he said, when each Fatherland Front party might ask for popular approval of its own platform, but now it was a question of saving Bulgaria and showing a united nation at the peace conference. Pressure was exerted upon opposition groups to withdraw their lists when it was too late for others to be substituted. Lists of candidates were so arranged that votes against the Fatherland Front would be votes against Zveno or others but not against the Communists.

The elections were scheduled for August 26, but on August 13 the opposition received the support for which it had been hoping since January. On August 13 the Regents, the Prime Minister, and party chiefs received a letter from Maynard Barnes, American representative on the Allied Control Commission, giving the views of the United States that whereas the electoral law was satisfactory, political maneuvers had made the conduct of a fair election impossible. Prime Minister Kimon Georgiev characterized the Barnes note as an unwarranted interference in Bulgaria's internal affairs. On August 14 the U.S.S.R. countered by recognizing the Fatherland Front as the legitimate government of Bulgaria. The opposition ministers threatened to resign from the government if the elections were not postponed, and 80 opposition candidates withdrew from participation in the election. On August 15 Georgiev flatly rejected the proposal for postponement. On August 16 Ministers Pavlov, Derzhanski, Chsmeczhev, and Stoyanov resigned, and on the following day were replaced by others. The Fatherland Front was disturbed by the turn of events, especially the withdrawal of the opposition candidates, but

celebrated the recognition by Russia. On August 19 Secretary Byrnes made the Barnes note public in an official statement, and on the following day Foreign Minister Ernest Bevin put the weight of the British Government behind the United States policy of nonrecognition. The Soviets countered by releasing Georgi Dimitrov from Russian citizenship, so that he could proceed to Bulgaria to participate in the elections. On August 22 there was no hint that the Fatherland Front government would yield to Allied demands, but diplomatic exchanges in the days following and apparently Russian advice caused a shift in policy, and on the morning of the 25th it was announced that the elections scheduled for the following day had been postponed. The postponement greatly heartened the opposition and shook the structure of the Fatherland Front; on the other hand it made Russian sponsorship of the Fatherland Front government more direct. The new date for the elections was fixed as November 18, the opposition groups were invited to discuss changes in the electoral law, and certain other concessions, such as expanded freedom of the press, were granted to them. But the Fatherland Front soon again stiffened its attitude, and the opposition again complained of unfair maneuvers and urged abstention from the election. Immediately preceding the new date the United States again intimated it might not recognize the results as conclusive, but the elections were carried out as scheduled and the Fatherland Front government was returned to power.

In its attitude towards foreign powers the Fatherland Front government has adhered consistently to a gradation indicated in its formal declaration of January 10: "In the field of foreign policy the Fatherland Front groups stand for eternal friendship with the great Russian nation, for the closest possible alliance and fraternal collaboration with the peoples of the new Yugoslavia, and for friendly relations with the nations of Britain, America, France and the remaining neighbors and freedom-loving nations." The Fatherland Front was oriented completely towards Russia, and the opposition sought aid and comfort from the Western allies and so created a certain strain between the U.S.S.R. and the Western allies on the question of Bulgaria. Differences of opinion in regard to the quality of the democracy practised in Bulgaria were but one manifestation of the strain. In the Allied Control Commission it was clear from the start that the Russian General Biryusov was the paramount power. Hostility to the British representative was almost open, and while greater courtesy was shown the American, American effectiveness was also hampered. It was only on July 10 that the United States representative on the Commission was informed by General Biryusov that henceforth orders would be issued in the name of the Allied Control Commission only after consultation with its British and American representatives. Even so the British and American representatives were not allowed complete freedom of movement. When taxed with the inequality of the balance, the Russians cited the analogy of the dominant position of the Western allies in the Italian commission. The Moscow and Sofia (as well as Belgrade and Tirana) radios, if not the official Soviet spokesmen, could call attention to the British support of reactionary elements in Greece during most of the year, and point by contrast to the vigorous efforts made in Bulgaria to eradicate the pro-German reaction and introduce democracy. Thus the Russians had turned over to the Bulgarian People's Court for trial the

members of the pro-German governments. At the end of January there were sentenced to death and promptly executed the three Regents, Prince Kyril, Filov, and Mihov; eight former court councillors; two former Prime Ministers (Bozhilov and Bagrianov), twenty members of the Filov and Bagrianov Cabinets, and many members of the Twenty-fifth National Assembly. Former Prime Minister Muraviev and his Minister of Interior Dimov were sentenced to life imprisonment, and there were other sentences of imprisonment. U.S.S.R. opinion approved of the sentences as a necessary purge to insure tranquillity; British opinion regarded them as directed against the enemies of Communism rather than the friends of Fascism.

In other respects also Russia sought to show that it acknowledged its position of primacy in Bulgarian affections. It made serious efforts to aid in the reorganization of the country's economic life and in reconstruction, and without urging changes in the rights of private property and free enterprise. The resolutions passed by the conference of industrialists in Sofia in January show no radical change from prewar concepts, and the "Freedom Loan" which was launched during the same month was premised on the continuation of small free enterprise and private property. It was a mark of Russian recognition of Bulgarian services when General Vladimir Stoichev, commander of the First Bulgarian Army in Hungary and Yugoslavia, marched beside Marshal Feodor Tolbukhin in the victory parade of the Third Ukrainian Army in Red Square in Moscow on June 25. On the other hand the Russians took steps to promote pro-Russian and pan-Slavic sympathies in Bulgaria, through cultural propaganda, through spelling reforms which brought the language nearer the Slavic norm, and through patronage of the Church. The All-Slav Congress which convened in Sofia on March 3 and 4 was actually a vehicle for Soviet propaganda, though Foreign Minister Stainov sought to allay Allied apprehensions by calling the meetings cultural. Delegates from other Slavic countries were outstanding Communists, and among the subjects discussed were the advantages of Russian as a common language and the question of a Federated Macedonia. The election of Georgi Dimitrov and Vasil Kolarov as representatives of the (Communist) Workers' Party to the National Committee of the Fatherland Front was an indication of Russia's plan for a permanent order in Bulgaria. Both men have a history as outstanding Bulgarian Communists, were key figures in the Third International, and have been closely identified with Soviet policies. Dimitrov was much publicized; his photographs appeared everywhere, and he was named to the honorary presidium of almost every gathering. His only official connection with Bulgaria, until he was released from Soviet citizenship, was his nominal membership in the Communist Party presidium and in the National Committee of the Fatherland Front. It was rumored that Dimitrov was slated to be president of Bulgaria, of a South Slav Federation, or even of a Balkan Federation. Eventual federation at least with Yugoslavia was implied in the Fatherland Front program, but there was still no open campaign for such federation. There was close cooperation in education and in railroad administration in the border regions, there were joint Tito and Fatherland Front celebrations, and various organizations in each country sent delegates to the other. Bulgaria maintained nominal diplomatic relations not only with Yugoslavia but also with Rumania

and with Turkey, Sweden, and Italy, and had diplomatic representatives in Moscow and Paris. The British protested the exchanges with Yugoslavia and Rumania on the ground that ex-enemy countries were not to be allowed to resume diplomatic relations before a final peace settlement. During the early part of the year Bulgaria was subjected to strong pressure by Greece for territorial and other indemnities. In Bulgaria this pressure was regarded as inspired by the British, and served to strengthen the bond with the Soviets. With the installation of a more democratic regime in Greece and the consequent abatement of its nationalist truculence against its northern neighbors, Russia announced it would send an ambassador to Greece (Nov. 29), and it appeared that Greek claims would no longer entail British hostility to Bulgaria. Bulgaria appeared to be securely in the Russian orbit, with the consent of the majority of its population. It appeared also that with the acquiescence of the Western allies in the situation Russia would relax its suspicions of the opposition elements and implement its professions of regarding Bulgaria as a federated ally rather than a subjugated enemy.

At the meeting of the Big Three Foreign Ministers in Moscow in December, it seemed clear that Great Britain and the United States also regarded Bulgaria as in the Russian orbit. Whereas it was decided that the three great powers were to advise Rumania jointly on the reorganization of its government, in the case of Bulgaria it was stated that Russia alone should give "friendly advice" on the desirability of broadening the government, but that when the government had been made more representative it would be recognized by Great Britain and the United States.

Russian influence was also instrumental in healing the schism between the autocephalous Church of Bulgaria under an Exarch and the Ecumenical Patriarchate of Constantinople, which had subsisted since 1872. The ending of the schism was announced by the Ecumenical Patriarch Benjamin on Feb. 22 and was widely celebrated. Russian interest was interpreted as part of a Russian scheme to bring all the Orthodox Churches into a closer union and under Russian patronage, so that they might somehow promote Russian interests, if only as a moral counterpoise to Roman Catholicism. More specifically it was thought that Russia contemplated a solution of the Straits question by the creation of an ecclesiastical state under the Ecumenical Patriarchate. Bulgaria would be directly interested in such a development, and much interest was shown in the question of the election of a successor to Benjamin, who died in November.

Production. Agriculture is the most important occupation of the people—the chief products being cereals, potatoes, tobacco, rose oil, cotton, beet sugar, and grapes. Livestock (1934): 1,497,624 cattle, 913,088 goats, 901,976 pigs, 531,519 horses, and 12,772,740 poultry. The output of raw silk in 1943 amounted to 159 metric tons. Mineral products include coal, lignite, cement, and salt.

Finance. Budget estimates (1944): 25,331 million leva (21,716 million leva in 1943). The total public debt on Sept. 1, 1943, was estimated at 53,000 million leva.

Foreign Trade. In 1942, including bullion and specie, imports were valued at 12,929,000,000 leva; exports, 13,418,000,000 leva. For the period Jan. 1 to Aug. 31, 1943, imports were valued at 9,863,000,000 leva, and exports at 10,185,000,000. The main exports were tobacco, fruit, eggs, wheat, hides, and wine.

BURMA. A British dependency in southeastern Asia with an area of 261,610 square miles, comprising Burma proper, the Chin and Kachin Hills tracts, Shan States and unadministered territory. Burma was separated from India in 1937 and given its own constitution and government. Before the Japanese occupation in 1942 the executive power was vested in the Governor (appointed by the British crown) who was advised by a council of ministers of not more than 10 members. The Governor had control over foreign affairs. Domestic affairs were administered by a Burmese ministry, responsible to a Burmese legislature consisting of a Senate of 36 members (18 elected by the House of Representatives and 18 appointed by the Governor) and a House of Representatives of 132 elected members. Large areas in the northern and eastern hill districts were excluded from the legislature's control and placed under the jurisdiction of the Governor. Upon the Japanese invasion, the British Governor, the Burmese Premier, and certain other Burmese officials set up headquarters at Simla, India. A few British officials of the Burma Government remained in charge of unoccupied districts of northern Burma.

On Aug. 1, 1942, the Japanese instituted a form of government made up of a joint Burmese and Japanese administration under the nominal leadership of U Ba Maw, a former Premier of Burma. Under this arrangement the Burmese Parliament disappeared. The supreme power rested with the Japanese commander in chief. With the defeat of the Japanese Burma returned to its former status and it was announced by the Burma Office on Oct. 8, 1945 that Sir Reginald Dorman-Smith, Governor of Burma, who was to complete five years' tenure of office on May 5, 1946, would hold office for a further year from that date.

Events, 1945. After the fall of Rangoon on May 3 the final collapse of the Japanese came swiftly. The reorganization of the Burmese Government was initiated on May 17 with the publication of a British White Paper emphasizing the intention of His Majesty's Government to assist Burma "to attain a status equal to that of the Dominions and this country." It was affirmed that until a general election could be held it was not possible to re-establish a Burmese government as it existed in 1941, and that the existing system of administration by the Governor in direct responsibility to the British Government would therefore be prolonged for three years more; that is, until Dec. 9, 1948.

The early establishment of an executive council, in which official and ultimately unofficial Burmans would be included, was envisaged in the White Paper. Anticipated later steps included the return to prewar status, the holding of a general election, improvement of the economic and financial position of the country, the drafting of a constitution by Burmans and the endorsement by the British Parliament of full dominion status. The scheduled areas (the Shan states and the tribal areas in the mountainous fringes of the country) were expected to be under a special regime until a suitable form of amalgamation with Burma proper, one acceptable to the inhabitants of the scheduled areas, should be devised.

The process outlined seemed to many Burmans, particularly those connected with the young and energetic nationalist movement, so uninspired in presentation and so prolonged in execution that they were inclined to question even the sincerity of the British Government in offering the plan. A memorandum issued late in May by the Burma Association representing Burmese nationals

resident in Britain demanded greater speed, a definite date for dominion status, an amnesty for collaborationists, and Britain's assumption of rehabilitation costs. The second reading of the bill to provide for the temporary extension of the existing Government gave the British Parliament on June 1 the double opportunity to discuss the White Paper and to assure Burmans of British sincerity and friendliness.

The Governor of Burma, Sir Reginald Dorman-Smith, arrived in Rangoon on June 19 and began conferences with Burmese leaders on board a British warship in the harbor. These leaders included representatives of the A.F.O. or Anti-Fascist Organization, the only political force to be reckoned with in Burma at this time, and the B.I.A. (Burma Independence Army), the armed section of a wider movement which was backed by the A.F.O. This movement, which had hoped for full independence under the Japanese, changed sides when their demands were not fulfilled and when Japanese defeat became certain. In June the Governor could not give the date for reestablishment of civil government in Burma. On Sept. 14 Japanese envoys signed a formal surrender at Rangoon.

Re-establishment of Civil Government. Sir Reginald Dorman-Smith returned to Rangoon on Oct. 16 and immediately took over from the military the general administration of Burma, including the judiciary. On that day the Governor's flag was hoisted at Government House for the first time since Feb. 22, 1942. The political leaders who declined to join in the official welcome included Major-General Aung San, chief of the B.I.A. and Thakin Than Tun, head of the Communist Party. The organizations represented were in control of the Anti-Fascist People's Freedom League, as the A.F.O. was now called, and withheld official participation lest the action commit them to approval of forthcoming offers from the Governor.

The King's message to the people of Burma defining the British Government's policy in respect to their country was read by the Governor on Oct. 17 at the City Hall. The message and the Governor's subsequent speech restated the British Government's purpose of developing dominion status for the first liberated territory to be re-entered effectively by the power formerly responsible for its control. Six days later the Freedom League's supreme council defined its attitude towards the proposed executive council by setting stiff conditions. It would participate only if the Governor accepted from its lists 11 of the 15 members and granted those members the right to allocate portfolios among themselves. Secondly, there should be universal suffrage for the general election, which should be for a constituent assembly and not for a new legislature as under the existing constitution. Subsequent discussions between the Governor and the representatives of the Freedom League broke down without agreement on these and related points. Members of the executive council appointed in November included U Tharrawaddy Maung Maung, former Minister of Education and Minister for Health and Public Works.

Economic Problems. The economic rehabilitation of Burma, which appeared to have suffered more from the ravages of war than any member of the British Commonwealth in the East, was scarcely begun when the year ended. Plans had been made and work started in the reconstruction of agriculture and forestry but industry was uncertain even of its status. Industrialists, both British and Bur-

mese, were pressing to have the question of responsibilities for war losses settled, and the latter were insistent that there be no discrimination with respect to nationality. Burma, the world's greatest prewar exporter of rice, was handicapped in the production and distribution of this commodity, especially in upper Burma, by shortage of cattle for ploughing, transportation difficulties and the currency situation. The driving out of the Japanese currency proved more difficult than had been anticipated, especially in rural regions where that currency had won acceptance and the new British substitute was unwelcome. While the political situation in Burma continued to demand official tact, economic problems called for expert assistance as well as for the former quality.

The Population. At the census of March 5, 1941, the population was 16,824,000. At least two-thirds of the people, most of whom live in rural districts, are of Burmese origin. In the extremely diversified population there are three other large groups: Tibeto-Burman, Mon-Khmer and Tai-Chinese.

The standard of education remains low, with only one-half of the male and 14 per cent of the female population literate. More than 84 per cent of the people are Buddhists. Nearly all of the rest belong to Animist, Mohammedan, Hindu or Christian sects.

Trade and Transportation. Imports in 1940 were valued at 270,350,000 rupees (rupee averaged \$0.30 for 1941) and exports at 531,120,000 rupees. India supplied 63 per cent of the imports and took 52 per cent of the exports (mostly rice). United States exports to Burma rose from \$1,765,000 in the first 9 months of 1938 to \$13,310,015 for the corresponding period in 1941. The Japanese conquest in May, 1942, ended all trade with non-Japanese areas and cut off the large transit trade to China via the Burma Road.

The Burma Road, opened in January, 1939 from the railhead at Lashio in northern Burma to Kuming, China, was Free China's principal trade route until it was blocked by the Japanese capture of Rangoon in February, 1942. A new road linking Assam, India, with the Burma Road was constructed by United States forces in 1943-1944. Normally economic life centers around the Irrawaddy and other great rivers which offer the principal means of transportation and communication.

ALZADA COMSTOCK.

BUSINESS REVIEW. American business went through three main phases in 1945. During the first four months of the year, nearly half the nation's production of goods and services was for war purposes, to supply the vast armed forces that were fighting in Europe and the Far East. Following V-E Day, war production declined gradually and some preparations were made for reconversion. However, munitions requirements were still so great that most of the controls imposed upon business by the Government during the two-war period had to be retained. After V-J Day, however, wholesale cancellation of government contracts and the removal of controls permitted industry to concentrate upon rapid reconversion of facilities to consumer goods production. Reconversion preparations were largely completed by the end of the year, but major labor disputes prevented volume output of the many consumer durable goods that were in urgent demand because of cessation of their production during the war.

The gross national product, or aggregate value of all goods and services produced in the United

States, was estimated at \$194,000,000,000 for the year. This compared with \$198,700,000,000 in 1944. During the first half of the year, the gross national product was at a record rate of \$208,000,000,000, of which 49 percent was purchased by the Government. In the second half of the year, gross national product declined to an annual rate estimated at \$182,000,000,000, of which the Government absorbed less than 40 percent.

The sharp decline in government spending during the latter part of the year was offset in part by an expansion in consumer expenditures. By the end of the year, production for the civilian market was officially estimated at \$20,000,000,000 a year more than on V-J Day.

Production for War. Orders for munitions had been increased by the armed forces following the German offensive in Belgium and Luxembourg in December, 1944. During the early months of 1945, strenuous efforts were made to expand the output of such critical items as mortars, navy rockets, aircraft, and radar equipment. That these moves were attended with great success was demonstrated by the fact that the output of mortars in February, 1945, was three times as large as in September, 1944, while increases of well over 100 percent were registered in production of navy rockets and aircraft. The index of munitions production, which stood at 105 in December, 1944, reached 109 in March, 1945, which was the peak for the year.

Following V-E Day, moderate cutbacks were made in war orders. These were smaller than had been originally anticipated, however, so that munitions output for the three months May-July, 1945, was only 9 percent below that of the first four months of the year. Furthermore, a sharp increase was ordered in incendiary bomb production as the aerial assault upon Japan was stepped up. By V-J Day, outstanding Government contracts for munitions still aggregated some \$40,000,000,000.

Following V-J Day, however, wholesale cancellations of munitions contracts came promptly, and the war production program was liquidated with great rapidity. Within forty-five days after Japan's surrender, 122,000 contracts with a value of \$25,000,000,000 were terminated. By the end of the year, around \$13,000,000,000 of contracts, many of them for naval facilities requiring a long period of construction, were still outstanding. Munitions procurement in 1946 is scheduled at only \$3,500,000,000, as compared with aggregate munitions purchases of \$36,300,000,000 effected during 1945.

The settlement of cancelled war contracts under the provisions of the Contract Settlement Act of 1944 was effected smoothly and rapidly. Out of 300,000 prime contracts terminated since the war began, some 240,000 had been settled by the end of 1945. Claims to be paid against remaining terminated contracts were estimated officially at only \$3,500,000,000, and contractors had already received two-thirds of this sum in the form of advance payments, partial payments or termination loans. Furthermore, the Government virtually completed the job of clearing war machinery and inventories out of privately-owned plants within the sixty day limit following contract termination specified in the Contract Settlement Act.

Removal of War Controls. When the war ended, the Administration was under pressure from business and other groups to remove controls as soon as possible, in order to hasten resumption of civilian production. On the other hand, there was pressure from labor and some other quarters to main-

tain controls in order to prevent erratic changes in the price level and other phases of the economy. The Truman Administration favored a policy of rapid removal of most controls, particularly those applicable to the production and distribution of goods, going so far in this direction that a reversal of policy as regards building materials was necessary late in the year, and some controls were reimposed.

The War Production Board was particularly prompt in removing controls. At the peak, it operated the Controlled Materials Plan and had outstanding some 650 orders affecting production, materials distribution, inventories, etc. When WPB went out of existence on Nov. 3, by order of the President, the Controlled Materials Plan was replaced by three priority regulations designed to assure raw materials for main government needs and the most urgent civilian requirements, and only 52 orders remained in effect. A large number of these concerned textiles, supplies of which remained inadequate because of a critical labor shortage. The Civilian Production Administration succeeded the War Production Board on November 3.

The Office of Price Administration ended all rationing programs following V-J Day, except sugar, and removed price ceilings from several thousand items, most of them of minor importance, supplies of which were adequate or which did not affect the cost of living materially. The Office of Defense Transportation abandoned the great bulk of its wartime regulations at the same time.

Surplus Disposal. Disposal by the Government of huge surpluses of equipment, supplies and materials left on its hands at the end of the war is a major factor affecting many industries. These surpluses equal a considerable portion of current requirements of some commodities, and their liquidation would have marked effects upon the availability of goods and upon prices. This task has been described as "the largest merchandising job ever undertaken anywhere. Actual liquidation of government-owned surpluses was limited during 1945, as the machinery for accomplishing this task was still largely in the formative stage. At the close of the year, the inventory of surplus production awaiting disposal approximated \$10,000,000,000, based on cost. More than one-third of this represented unsalable aircraft, the bulk of which was to be scrapped. It was expected that another \$40,000,000,000 of goods and property, valued at cost, will be declared surplus in 1946 and 1947.

The President turned over the task of surplus disposal for the most part to the Reconstruction Finance Corporation, by an Executive Order issued in October, and the War Assets Corporation was made a subsidiary of the RFC to undertake this function. A nation-wide network of offices was established by the War Assets Corporation, and the intensive commercial selling methods developed by private enterprise were applied in pushing surplus sales.

Reconversion Problems. While prompt, drastic cutbacks in war production and the rapid removal of wartime controls greatly facilitated the reconversion of industry to consumer goods manufacture, a number of bottlenecks were encountered by business. Many important raw materials and finished goods remained in short supply. Lumber, tin, lead, copper, textiles and various types of heavy equipment were not readily available. Manufacturers of consumer durable goods, the demand for which was particularly keen, could not obtain some of the component parts required to fabricate their

products. Residential construction, urgently required in large volume to relieve the worst housing shortage in the nation's history, was held back by lack of lumber, brick, soil pipe, and gypsum lath.

These materials shortages were in part due to the shortage of labor in some communities and industries. Despite the fact that 5,400,000 men and women were discharged from the armed services in the four months following Japan's surrender, many manufacturers could not secure sufficient labor, especially when overtime was largely eliminated because they could not afford to pay time and a half and yet sell civilian goods within OPA ceiling levels at a profit. While wartime controls over manpower were lifted on V-J Day and the War Manpower Commission was abolished shortly thereafter, the United States Employment Service, which was made a part of the Department of Labor, sought to encourage the flow of workers into consumer goods industries where shortages were severe. The Employment Service handled the largest number of applicants in its history. However, many persons released from the armed forces did not look for work immediately, workers discharged from war plants took vacations in many cases, and numerous women and older persons who had been working during the war withdrew quickly from the labor force as households were reestablished on a prewar basis. Industries where wages were relatively low faced a special problem, in that workers accustomed to high wartime rates of pay refrained from returning to jobs in these lines.

The virtual removal of wage controls four days after Japan's surrender brought sweeping wage increase demands from labor. In many instances, these demands were granted, but in other cases employers refused to agree to sharp wage advances on the ground that price ceilings did not permit them to pay out so much more in wages, or because the demands were not justified by prevailing wage scales paid in other industries. A number of major strikes resulted, the most serious of which was the walkout of General Motors Corporation employees during the final weeks of the year. These strikes offset in part the speed with which industry had reconverted its plants, so that actual production of automobiles and other important consumer durable goods fell far short of projected schedules of output.

Durable Goods Industries. Durable goods industries were most affected by the drastic decline in war production during the latter half of 1945. Output of durable manufactures declined by over 40 per cent, although a slight upturn was registered in the closing weeks of the year. Minerals production declined also, but to a lesser degree.

The drop in durable goods output was to a large extent temporary, however. Shortages of consumer goods were mainly in the durable goods field. Hence, the decline reflected the time required to shift from war to peacetime production in these industries.

Indices of mineral production for December, 1944, and December, 1945, compared as follows:

MINERAL PRODUCTION
(1935-39 average = 100)

	1944	1945
Bituminous coal.....	138	142
Anthracite coal.....	109	94
Crude petroleum.....	146	140
Metals other than gold and silver	108	102
Minerals—Total.....	137	134

The demand for many metals is expected to outrun domestic production during the next few years. In that event, the United States will have to rely to a greater extent upon imports, although sales of Government-owned surpluses may help to satisfy the demand. Proposals for maintaining a huge Government stockpile of strategic metals could make supplies less plentiful and tend to lift prices, once price controls are relaxed.

Automobile production in 1945 was negligible, falling far below early estimates that over 500,000 cars could be turned out. Actual production for the year was 83,792 passenger cars. While shortages of some materials and parts were a factor, labor difficulties, and particularly the General Motors strike, were chiefly responsible. Truck production, which involved far fewer reconversion problems, recovered sharply, light truck output rising to over 50 percent of the prewar level. Civilian truck production, which aggregated only 15,853 in December, 1944, rose to 53,103 in November, before it was cut by strikes.

Indices of durable goods manufactures, as compiled by the Board of Governors of the Federal Reserve System, compared as follows for December, 1944, and December, 1945:

DURABLE GOODS PRODUCTION
(1935-39 average = 100)

	1944	1945
Iron and steel	198	165
Machinery	431	234
Automobiles	235	92
Lumber	111	85
Furniture	142	131
Plate glass	51	3
Glass containers	218	244
Cement	90	119
Clay products	116	125
Gypsum and plaster products	171	185
Abrasive and asbestos products	307	215
Durable Manufactures—Total	343	187

Non-durable Consumer Goods. Since output of non-durable consumer goods was fairly well sustained during the war, this part of the economy was less affected by the cessation of hostilities.

NON-DURABLE GOODS PRODUCTION
(1935-39 average = 100)

	1944	1945
Textile fabrics	141	132
Cotton consumption	146	125
Rayon deliveries	215	228
Carpet wool consumption	57	104
Apparel wool consumption	215	184
Woolen and worsted cloth	166	154
Leather tanning	115	114
Shoes	113	108
Wheat flour	123	134
Butter	78	60
Cheese	154	144
Canned and dried milk	179	136
Meat packing	158	155
Pork and lard	164	171
Beef	149	138
Veal	175	138
Lamb and mutton	149	148
Processed fruits and vegetables	146	123
Confectionery	138	113
Alcoholic beverages	169	212
Cigars	95	87
Cigarettes	155	139
Pulp	150	137
Paper	129	131
Printing and publishing	104	112
Gasoline	141	144
Coke	167	145
Paints	141	126
Soap	137	244
Rayon	242	373
Industrial chemicals	396	197
Rubber products	239	204
Non-durable Manufactures—Total	173	156

Textile production, however, was seriously hampered by a shortage of labor which was probably exaggerated by the fact that wage scales in the industry, although increased sharply during the war years, remain lower than in a number of other fields. Unwillingness of OPA to permit more than selective and small price increases, and efforts of that agency to force increased output of low-priced goods, were also blamed by the trade for the persistence of the shortage of textile products. Depletion of retailer inventories during the war, the need by veterans for civilian clothes and urgent relief requirements for textiles in Europe intensified the shortage.

Production of non-durable manufactures in December, 1944 compared with December, 1945, is shown in table.

Retail Trade. Expenditures upon consumer goods and services during 1945 were estimated by the Department of Commerce at \$100,800,000,000, as compared with \$97,600,000,000 in 1944. This was a new high record, but even larger totals were expected for postwar years as consumers finally obtain the durable goods they could not buy during the war. Contrary to the usual pattern, retail trade rose despite the decline in consumer incomes. This was due to the fact that consumers saved a very much larger part of their incomes during the war than is normally the case. These savings were, to a large extent, forced or involuntary, and reflected the lack of goods.

The purchasing power received by major groups of the population during the year is reflected in statistics of income payments to individuals as follows:

INCOME PAYMENTS TO INDIVIDUALS
(Billions of dollars)

	1944	1945
Salaries and wages	112	110.2
Other labor income	5.8	8.6
Entrepreneurial income and net rents	28	30.
Interest and dividends	11.2	12.2
Total income payments	157	161

Sales of all retail stores for the year were estimated at \$74,400,000,000 by the Department of Commerce, which compared with \$69,500,000,000 in 1944. The retail price index rose from 139.6 in December, 1944 to 142.2 in the final month of 1945.

Department store sales reflected the further rise in trade volume during the year. Indices for both sales and inventories for each month of 1945, with comparisons for 1944, follow:

DEPARTMENT STORE SALES AND INVENTORIES
(1935-39 average = 100)

	Sales		Inventories	
	1944	1945	1944	1945
Jan.	174	197	154	148
Feb.	175	211	154	149
March	183	220	150	148
April	173	181	145	156
May	183	188	147	165
June	176	202	157	181
July	189	218	165	189
Aug.	187	200	172	187
Sept.	187	199	161	171
Oct.	193	213	154	161
Nov.	205	226	144	150
Dec.	196	215	136	142
Average for year	186	207	153	162

Commodity Prices. The index of wholesale prices compiled by the Department of Labor increased by little more than 2 percent during 1945. While this index rose to the highest level since 1920, its

apparent relative stability for the year did not reflect the enormous pressures to lift the price level that were at work. The nation's money supply had been tripled during the war, and the national income had doubled. The supply of consumer goods and services, which could not be increased during the war because of preoccupation with munitions production, could be increased only gradually even after the war was over because of the reconversion bottlenecks and the labor troubles described above. Hence, conditions were similar to, and even more explosive than, those that caused a runaway rise in commodity prices in 1919 and 1920, followed by an even more drastic deflation late in 1920 and 1921, when supplies of goods finally caught up with the demand.

Recognizing this situation, the Administration retained the bulk of price controls. It also called on Congress to extend the life of the Emergency Price Control Act beyond June 30, 1946, but this request had not been acted upon by the end of the year.

Pressures to raise prices came from various sources. The farm bloc in Congress sought higher prices for agricultural products through recomputation of parity levels and in other ways. Many industries and individual corporations asked for higher price ceilings, on the ground that their costs had risen. The greatest single pressure came, however, from the wage increase demands of organized labor. The intimate relation that exists between wage costs and prices became increasingly evident. The President's Executive Order 9599, issued four days after V-J Day, limited wage increases to those that would not lead to price increases. But pressure for wage increases became so great that the President issued his Executive Order 9651 on October 30, specifying that price relief shall be given industries that grant wage increases, where found necessary after a six months' trial period.

Wholesale prices of major commodity groups compared as follows in December, 1944, and December, 1945:

WHOLESALE COMMODITY PRICES
(1926 = 100)

	1944	1945
Farm products	125.5	131.5
Foods	105.5	108.6
Building materials	116.4	119.5
Chemicals and allied products	94.8	96.1
Fuel and lighting materials	83.1	84.8
Hides and leather products	117.4	118.9
Housefurnishing goods	104.4	104.7
Metals and metal products	103.8	105.6
Textile products	99.5	101.4

Source: U.S. Department of Labor.

Actual prices of important commodities at the end of the year compared as shown below.

The cost of living index of the United States Department of Labor, like the index of wholesale commodity prices, rose only about 2 percent during the year. The Office of Price Administration concentrated upon maintaining controls on all cost of living items, recognizing that this index plays a larger part in wage negotiations than any other single factor. Thus, price ceilings for citrus fruits, which had been suspended because of the bumper 1945 crop, were quickly re-imposed in December when it became apparent that retail prices were being marked up above the old ceilings by retailers. Citrus fruits constitute a material part of the food item in the official cost of living index.

Business Profits. Corporate profits after taxes for 1945 aggregated \$9,000,000,000 as compared with

PRICES OF IMPORTANT COMMODITIES
(End of December)

Commodity	1944	1945
Wheat #2, K.C., bu.	\$1.69- ¹ / ₂	\$1.69- ¹ / ₂
Corn #3, yellow, Chi. bu.	1.12- ¹ / ₂	1.18- ¹ / ₂
Flour, bbl.	3.75	3.70
Pork loins, lb. . . . .	.25- ¹ / ₂	.25- ¹ / ₂
Butter, extra, lb. . . . .	.41- ¹ / ₂	.46- ¹ / ₂
Eggs, firsts, doz. . . . .	.43	.433
Potatoes, white, bag *	1.25	1.50
Canned peaches, doz., factory	2.34	2.34
Sugar, Cuban raw, lb. . . . .	.0375	.0375
Coffee, Santos, lb. . . . .	.13- ¹ / ₂	.13- ¹ / ₂
Cocoa, Acera, lb. . . . .	.0899	.0899
Cotton, Galveston, lb * . . . . .	.2154	.2439
Print cloths, yard . . . . .	.09439	.09906
Wool, territory, Boston, lb	1.17	1.05
Silk, raw, lb *	3.08	3.08
Rayon, viscose, lb. . . . .	.55	.55
Pig iron, Valley, ton	23.50	25.75
Steel bars, Pittsburgh, 100 lb.	2.15	2.20
Copper, lb. . . . .	.12	.12
Zinc, E. St. Louis, lb. . . . .	.08- ¹ / ₂	.08- ¹ / ₂
Lead, lb. . . . .	.065	.065
Sulfuric acid, ton	16.50	16.50
Soda, caustic, 100 lb	2.00	2.00
Southern pine, K.C., 1,000 ft	52.50	54.97
Turpentine, gal. . . . .	.87	.93- ¹ / ₂
Linseed oil, lb. . . . .	.155	.155
Coal, bituminous, ton, Clearfield	3.10	3.38
Coal, anthracite, ton	7.85	8.85
Petroleum, crude, K-O, bbl	1.17	1.17
Bunker oil, C., bbl	1.77	1.51
Rubber, lb . . . . .	.22- ¹ / ₂	.22- ¹ / ₂
Hides, heavy native, Chi. lb. . . . .	.15- ¹ / ₂	.15- ¹ / ₂

Source: Journal of Commerce, quotations for New York City unless otherwise indicated

* Only products without ceilings are potatoes, cotton and raw silk.

\$10,000,000,000 in 1944. Despite the impact of cancellation of war contracts, deductions on account of accelerated amortization of defense facilities and reconversion expenses, net earnings were surprisingly well sustained. This was due chiefly to the reduction in corporate taxes, particularly excess profits taxes, reflecting smaller profits before taxes. Federal income and excess profits taxes on corporations were estimated at \$13,000,000,000 in 1945, as compared with some \$15,000,000,000 in 1944. Profits of large corporations in a number of major industries for 1944 and 1945, as compiled by the National City Bank, compared as follows:

EARNINGS OF MANUFACTURING COMPANIES
(In thousands)

No. of Cos.	Industrial Groups	1944	1945
17	Baking	\$ 23,697	\$ 25,305
14	Meat packing	46,236	34,307
59	Other food products	84,244	77,491
34	Beverages	56,277	71,616
12	Tobacco products	60,568	61,984
35	Cotton goods	16,690	18,643
45	Other textile products	37,112	44,837
21	Leather and shoes	16,695	16,291
16	Rubber products	64,128	61,433
29	Pulp and paper products	27,171	25,959
32	Chemical products	162,402	156,845
9	Drugs, soap, etc	30,871	31,261
10	Paint and varnish	8,723	10,249
16	Petroleum products	79,046	70,816
20	Cement, glass, stone products	22,353	23,857
25	Iron and steel	161,417	156,418
10	Agricultural implements	26,587	23,104
23	Electrical equipment	24,323	21,730
66	Machinery	40,112	37,621
105	Other metal products	84,873	79,621
62	Transportation equipment	50,999	52,757
85	Misc. manufacturing	48,802	51,264
745	Total manufacturing	\$1,173,326	\$1,153,409

Foreign Trade. A major development in foreign trade during the year was the cancellation of Lend-Lease immediately after V-J Day. The result was a sharp decline in exports, although by the end of the year commercial exports were rising gradually. The demand for American goods was extremely

keen, owing to the wholesale destruction abroad during the war, the severe curtailment of productive capacity of many important countries and huge requirements for immediate relief.

Numerous government controls and special arrangements affecting foreign trade were terminated following the end of the war. By the end of 1945, only 15 percent of the commodities that had been under export license control, and 25 percent of those that had been under import control, were still under such regulation. The Combined Raw Materials Board and the Combined Production and Resources Board that had been set up during the war to coordinate import purchases by the United States and British Empire countries ceased to exist on Dec. 31, 1945, and were succeeded by committees composed of representatives of the principal producing and consuming nations to supervise trade in rubber, tin, hides, skins and leather, textiles, and coal.

Export controls that remained at the end of the year covered such items as foods, cotton textiles, hides and leather, rubber products and fertilizers. The items subject to import control, and for the most part to price controls also, were rubber, cattle hides, molasses, rotenone, and hard fibers such as sisal.

Business men planned aggressively for a vast increase in export sales, particularly of capital goods, in view of the urgent reconstructive needs and the funds to be advanced foreign buyers to pay for their purchases, by the Export-Import Bank, the International Bank for Reconstruction and Development, and, in the case of Great Britain, directly by the U. S. Government.

JULES I. BOGEN.

CANADA. A dominion of the British Commonwealth of Nations, comprising nine provinces and two territories, with a land area of 3,695,189 square miles. Capital, Ottawa.

Government. Executive power is exercised in the King's name by the Governor General of Canada, acting through a responsible ministry. Legislative power rests in a Parliament of two houses: a Senate of 96 members appointed for life by the Governor-General on advice of the Cabinet and a House of Commons of 245 members elected for five years (unless the government is sooner dissolved) by popular male and female suffrage. The nine provinces enjoy a large measure of local autonomy, with a separate parliament and administration for each. A lieutenant-governor (appointed by the Governor-General-in-Council) heads each provincial executive. Governor-General in 1944, the Earl of Athlone, to be succeeded in the spring of 1946 by Field Marshal Sir Harold Alexander, appointed Aug. 1, 1945.

The Liberal Government sworn in Oct. 23, 1935, was constituted as follows on Sept. 1, 1945: William Lyon Mackenzie King, Prime Minister, President of the Privy Council, Secretary of State for External Affairs; James A. Glen, Minister of Mines and Resources; James H. King, Minister Without Portfolio; Ian Alistair Mackenzie, Minister of Veterans' Affairs; James L. Ilsley, Finance; Lionel Chevrier, Transport; Clarence D. Howe, Reconstruction and Supply; James G. Gardner, Agriculture; Paul Martin, Secretary of State; James A. MacKinnon, Trade and Commerce; Ernest Bertrand, Postmaster General; Dr. J. J. McCann, National Revenue; Douglas C. Abbott, Defense and the Navy; Louis S. St. Laurent, Justice and Attorney General; Humphrey Mitchell, Labor; Alphonse Fournier, Public Works; H. Francis G.

Bridges, Fisheries; Brooke Claxton, National Health and Welfare; Colin Gibson, National Defense for Air; Joseph Jean, Solicitor General; Dr. J. J. McCann, National War Services (ministry to be discontinued).

Events, 1945. In spite of the relief which the end of the war brought to Canada, the immediate necessity of reshaping the life of the country on a peacetime basis and the emergencies of a national election, Canada's outlook in 1945 was more thoroughly international than for many years. The country's representatives participated actively in the British Commonwealth Conference, the San Francisco Conference, the United Nations Relief and Rehabilitation Administration council meeting and the United Nations Executive Committee and Preparatory Commission sessions. Parliament ratified the Bretton Woods Agreements and by extending foreign credits for postwar trade at the same stroke fortified the country's economy and treated other countries generously.

When one of Canada's longest Parliaments ended on Apr. 16, thus freeing members to attend the San Francisco Conference and to participate in the national election, peace in Europe had not yet come and the tasks of reconversion, in anticipation of which Canada's vast reconstruction program had been shaped in 1944 (see 1945 YEAR BOOK, pp. 101-2), were not yet known to be at hand. In the succeeding Parliament, which opened on Sept. 6, the reconversion program was further developed. The Veterans' Land Act amending bill, making changes in the Act passed in 1942, increased the scope of settlement opportunities and provided that acceptance of the benefits of the act should not disqualify a veteran from taking a seat in Parliament.

General Election. The general election on June 11 which returned Liberal Prime Minister W. L. Mackenzie King and his party to power was preceded by a lively three-sided campaign. The Progressive Conservative party, the opposition, was led by John Bracken, former Prime Minister of Manitoba, who offered a "national policy" which included opposition to concentration of power in Ottawa and new tax policies for the stimulation of business. Speaking in Calgary on May 26 at a political rally Bracken accused Prime Minister King of permitting Canada's foreign policy to be dictated from abroad and being "now determined to transfer our foreign policy from Ottawa to Washington."

The Cooperative Commonwealth Federation carried on a sufficiently energetic campaign to cause some anxiety for the two older parties. M. J. Coldwell, the C.C.F. leader, who was a member of the Canadian all-party delegation to the United Nations Conference at San Francisco, set forth the party program in a radio address from that city on May 18. The program included full employment, increased farm prices, social ownership and control of giant monopolies and planned trade. Coldwell spoke at this time of the disturbing report that a "flood of vicious propaganda" against the C.C.F. was coming from "big corporate and financial interests" in Toronto.

Prime Minister King based his campaign upon the Liberal Party's war record, upon its performance and intentions in the field of social reform and upon the maintenance of Canada's status as a country influential in international affairs. The achievements at San Francisco of the Canadian delegation led by King appeared to reinforce the Liberal claim to leadership in foreign relations.

The election scene was enlivened by the efforts of minor groups, including the Social Credit Party

and the Bloc Populaire, representing the national and youthful elements among French-Canadian voters, which was opposed to international and social democratic programs, in particular those sponsored by the C.C.F. A short-lived organization, the National Front Party, was announced on Apr. 27 by P. J. A. Cardin, former Liberal member of the House of Commons who resigned in 1942 as an opponent of conscription, as contesting seats in the general election. Cardin announced the dissolution of this party on May 8. The Labor Progressives were active in eastern industrial districts and were subsequently involved in Coldwell's accusation that his defeat was due in part to "confusion deliberately created . . . in the interests of the Liberal Party by Communists under the guise of Labor-Progressives."

Canadian servicemen and women overseas began voting on May 28 but the count of their vote could not be completed until after the election on June 11. The result of the civilian voting for the 245 seats in the House of Commons was: Liberal, 118; Progressive-Conservative, 66; C.C.F., 26; Social Credit, 13; and the remainder scattered. One of the curiosities of the election was King's loss of his own constituency at Prince Albert, Saskatchewan. He was later elected by Glengarry in eastern Ontario. In the overseas service voting the Liberal Party topped its opponents, but the C.C.F. took a high second place and the Progressive-Conservatives were shunted into a poor third.

Provincial Elections. The liveliest of the provincial elections in 1945 was that in Ontario on June 4, when Progressive-Conservative John Drew was returned to office with 66 seats out of 90. The Liberals and the C.C.F. won only 11 and 6 seats respectively, although in the preceding legislature their combined strength controlled the body. The C.C.F. was the official opposition in Ontario before this election. Progressive-Conservatives promptly but mistakenly found in the returns a sign of victory in the national election to be held a week later, but later found the Ontario returns merely a sign of changing sentiment in the province itself, particularly in industrial areas.

In the Manitoba election on Oct. 15 the Conservative Government, with Premier Stuart S. Carson at its head, was reelected. The C.C.F. increased the number of seats held to 8, plus an independent C.C.F. member, compared with three in the preceding House. In Nova Scotia on Oct. 23 the Liberals had an almost clean sweep, with the winning of 28 out of 30 seats, the elimination of the Progressive-Conservatives from the Legislature and the reduction of C.C.F. seats from three to two. In British Columbia provincial elections on Oct. 25 the Coalition Government was reelected by a wide margin.

San Francisco Conference. Canada's active interest in the United Nations Organization was shown in March in a 10-day debate on foreign policy as related to the San Francisco Conference. Prime Minister King announced early in the month that he would include representatives of the opposition in the Canadian delegation, a statement which was well received as a promise of the first wartime step to have political opponents of the Liberal Government share Government responsibility. The debate, which filled the first days of the final session of Canada's 19th Parliament (Mar. 18-Apr. 16), concluded with the passage by a vote of 202 to 5 of a motion to authorize Canada's participation in the Conference. The five opponents were members of the Quebec anti-conscription bloc.

Before the session opened King paid a brief visit

to President Roosevelt in Washington for discussion of the Yalta agreements and the San Francisco plans. Representatives of the Dominions met in London on Apr. 4 for a conference on the same group of subjects, with special reference to the Canadian contention that the middle powers, presumably led by Canada, and the small powers should have a voice in decisions involving the use of force or sanctions. King, who consistently stood for independence of action for Canada, reiterated his position in the closing house of the March debate in the Canadian Parliament, when he expressed his disapproval of any plan for a unified role for the British Commonwealth.

The Canadian delegation to San Francisco, named by Prime Minister King on Apr. 9, consisted of 7 members: King as leader of the delegation; Minister of Justice L. S. St. Laurent; Dr. J. H. King, Government leader in the Senate; Mrs. Cora Casselman, Liberal member of the House for Edmonton East; Gordon Graydon, Progressive-Conservative House leader; Senator Lucien Morau, Progressive-Conservative from Quebec; and M. J. Coldwell, C.C.F. leader. It was evident that Canada's relations with Latin America were receiving attention, for the Prime Minister announced that the Ambassador to Chile, Warwick F. Chipman, and the Ambassador to Brazil, Jean Desy, would accompany the delegation.

Because of the coming national election several of the Canadian delegates could not remain until the end of the conference, which lasted from Apr. 25 to June 26. Prime Minister King was present at the time of the admission of Argentina on Apr. 30, a step for which he voted the delegation's approval but which was later denounced by C.C.F. leader M. J. Coldwell. King left on May 14 and Graydon, Coldwell and Mrs. Casselman shortly thereafter. The Dominion was elected one of the 14 nations on the conference's executive committee, a position which later assured her a place on the UNO executive committee and the Preparatory Commission, both of which met in London later in the year.

The Canadian delegation's amendments to the Dumbarton Oaks proposals were well received, and late in May Canada was the leader in forcing the acceptance of the principle that when the question of using a country's armed forces is involved that country should have a right to vote on the matter in the Security Council. Canada was also a leader in demanding an enlarged place in the United Nations Organization to the Economic and Social Council.

Dominion-Provincial Conference. The Prime Minister's decision to convene a Dominion-Provincial Conference in Ottawa on Aug. 6 reflected the necessity of devising new financial and jurisdictional relations between the Federal Government and the provinces. A broad agenda was provided covering financial, reconstruction and social security issues, and it was announced that the August meeting would be preliminary only, after which adjournment would be taken in order to give time for the careful consideration of the questions raised.

As a war measure the Dominion took over personal income and corporation taxes from the provinces and paid them cash grants in return. The meeting of the provincial prime ministers was called at Ottawa in order to reorganize the system on a peacetime basis. The talks ended on Aug. 10, after the Dominion Government had presented its proposals, with some of the provinces reserving their counter-proposals until further study could be made. Sessions were resumed in the last four days of November and then adjourned until early in

1946. The economic committee of the conference met in Ottawa in the first part of December. The Dominion proposals were more generous than had been anticipated, but the provinces were naturally reluctant in time of peace to yield to the Federal Government powers that they had formerly exercised.

The Prime Minister Abroad. Prime Minister King's visit to President Roosevelt in March took place a little more than a month before the President's death on Apr. 12. King paid a tribute to the late President in the House of Commons on that evening and the House then adjourned for the night sitting. Memorial services were held throughout Canada in the succeeding days. King announced on June 2 that he had been invited by President Harry S. Truman to "continue at the White House the informal talks which in the past have done so much toward creating the warm friendship and close understanding between our two countries."

The Prime Minister told the House of Commons on Sept. 27 that he proposed to start within a few days on an extended tour to include the United States, Britain and western Europe. King was in Washington for conversations with President Truman on Sept. 30, after which he sailed for England. The Canadian Prime Minister's talks with British Prime Minister Attlee and his subsequent travels were on an informal basis, but on Nov. 11 King and Attlee were again in Washington to confer with President Truman on the Anglo-Canadian proposal for internationalization of atomic energy. After 5 days in conference the three leaders joined in expressing their willingness to share reciprocally with other United Nations details on the practical application of atomic energy "just as soon as effective enforceable safeguards against its use for destructive purposes can be devised." On Nov. 16 King and Attlee left together for Ottawa, where the British Prime Minister addressed the members of both houses in the House of Commons on Nov. 19.

Foreign Economic Relations. The end of the war brought to Canada the realization that energetic steps must be taken if the country was to retain the very high place in foreign trade which she had held in the period of hostilities. Canada now had a higher per capita foreign trade than any other country, with the result that her industries and level of employment had become peculiarly susceptible to fluctuations in international commerce. Canada's Mutual Aid scheme, whose cumulative value up to the end of hostilities against Japan was about \$2,400,000,000 (a large part of which was a gift to Britain) ended with the signing by Japan of surrender terms on Sept. 2, according to a statement in the House of Commons on Sept. 7 by Finance Minister J. L. Ilsley.

The Finance Minister assured the House that the termination of mutual aid would not interrupt or delay the flow of essential civilian supplies to Allied nations. Britain would have no difficulty in the immediate future getting funds for making Canadian purchases, for she would have income from Canadian forces overseas and also from the settlement of past transactions. Later Britain and the other members of the sterling area must have separate consideration. Many countries outside the sterling area would need assistance in buying from Canada. The groundwork for such aid was given by export credits, for which negotiations were pending.

Canadian exporters were given protection by the Export Credits Insurance Act passed by Parliament in 1944. The Export Credits Insurance Cor-

poration, for which the act provided, opened for business at the beginning of September. It was empowered to issue contracts of insurance up to a total of \$100,000,000 covering exporters against the main risks of loss not normally covered by commercial insurers, such as the insolvency of the foreign buyer or his protracted default.

Finance Minister Ilsley introduced in the House of Commons on Dec. 3 a bill to increase the amount of loans to be made under the Export Credits Act from \$100,000,000 to \$750,000,000. France was scheduled to get the largest credit, \$242,500,000; the Netherlands was to have \$85,000,000; Norway \$30,000,000; and the Bank of the Netherlands Indies \$65,000,000. At this time negotiations were going on with the Soviet Union, to whom \$3,000,000 was already granted, and with China, and it was expected that Belgium and India would also seek credits in Canada. The Finance Minister reminded the members of the House that with such steps Canada was reviving and developing her own export trade, and that the orders for food, railway equipment and ships placed by some of the countries named had already been of great value.

In the debate on this measure the next day Ilsley told the House that in the next session a special piece of legislation would be introduced to provide a large credit to Britain, and that in the meantime resources were adequate for furnishing Britain with abundant supplies. It was obvious to his hearers that the outcome of the Anglo-American loan negotiations in Washington must be known before the Canadian-British arrangements were made. The bill, known as the Export Credits Insurance Act, was passed on Dec. 6.

The measure providing for Canada's participation in the Bretton Woods Agreement had a brief but stormy passage through the House in December, but was finally approved on Dec. 14 by a vote of 169 to 9. Those who voted against the bill were all members of the Social Credit Party, who opposed the use of the gold standard, the "surrender of Canadian sovereignty," the "export of unemployment" by the United States and several other trends which they believed would follow. In the Bretton Woods Agreement Canada's share in the monetary fund was set at \$300,000,000 and in the bank at \$325,000,000.

Participation in UNRRA. At the third council meeting of the United Nations Relief and Rehabilitation Administration held in London in August Canada was represented by L. B. Pearson, Canadian Ambassador to Washington, as chief delegate, and three others. Canada's first orders for international relief supplies to be furnished to UNRRA were made public in July. They included 20,050 tons of agricultural machinery and 14,400,000 pounds of Canadian canned fish. The effect upon the country's expanded war plants of the maintenance of such demands was welcomed even in the initial stages, and it was common knowledge that larger orders were under discussion between UNRRA and the Government.

The Peacetime Budget. In Canada's first peacetime budget, which was presented in the House of Commons by Finance Minister J. L. Ilsley on Oct. 12, the relief from wartime needs was reflected in a series of tax reductions amounting to \$100,000,000 in the remaining part of the current fiscal year ending Mar. 31, 1946. The modifications included a 16 per cent cut in the personal income tax, reduction of the excess profits tax to 60 per cent with the refundable portion eliminated, important excess profits tax concessions to small business concerns,

abolition of the 10 per cent war exchange tax, and exemption from the sales tax for all machinery and apparatus used directly in the manufacture of goods.

Isley said that the changes were made in recognition of "the paramount importance of assisting speedy reconversion, of restoring incentives, and of encouraging enlarged and efficient production and export on which our employment, income and welfare depend." Total expenditures for the year 1945-46 were estimated at \$4,650,000,000, revenues at \$2,500,000,000 excluding refundable taxes, and the deficit at \$2,150,000,000, or \$359,000,000 less than in the previous year. No provision was included in expenditures for subscriptions to the Bretton Woods international monetary fund of the International Bank for Reconstruction and Development, with the result that only token contributions could be made in the current fiscal year. Export credits subsequently granted and loans to the Foreign Exchange Control Board were also outside the budget.

Problems of Reconversion. Canadian industry at first accomplished its tasks of reconversion with greater ease than had been anticipated. Manufacturing resources more than doubled during the war, according to a report sent to the House of Commons in December by the Reconstruction Department, and many industries planned expansion and the production of new lines, including more than 100 major products never before manufactured in Canada. Nevertheless the number of unemployed, which rose rapidly towards the end of the year, reached 174,000 in the latter part of November. As winter drew near the cessation of some seasonal work and the accelerated pace of discharges from the armed forces contributed to the situation. Although labor surpluses were conspicuous in the wartime industrial centers, actually unemployment was present throughout the Dominion.

Industrial disputes were a disturbing factor in the economy in the latter part of the year. A strike of the United Automobile Workers (C.I.O.) in the Ford Motor Company of Canada plant in Windsor, Ontario, which began on Sept. 12 and involved 10,000 workers, was extremely difficult of settlement. On Nov. 12 Labor Minister Humphrey Mitchell was obliged to report to the House of Commons that after a six-day visit to Windsor he could report no settlement in the strike, which was now augmented by a sympathy strike of about 30 other plants in the district. On Nov. 27 Mitchell and Ontario Labor Minister Daley offered a formula which the union rejected but on which it took a second vote in December. The plan provided for negotiation plus arbitration on union demands, the chief of which were union shop and checkoff. On Dec. 19 the union voted to return to work pending negotiations.

The cost-of-living index for Canada, calculated on the basis that 1935-1939 equals 100, stood at 119.9 on Nov. 1. Fluctuations in the index have not been reflected in wage rates since cost-of-living bonuses were merged with basic wages under Government order. The rationing of meat and butter was continued after both were dropped in the United States, and a more limited butter ration was announced for 1946. The Dominion-Provincial Agriculture Conference agreed on Dec. 5 to let the 1946 wheat acreage stand unchanged from that of 1945 at 23,414,000 acres for the whole of Canada and 22,566,000 acres for the prairie provinces. It was announced in October that by agreement between the United States and Canada

the Canadian Army would take over on Apr. 1, 1946 responsibility for maintaining that part of the Alaska highway which runs through Canada.

The People. The estimated population of Canada in 1945 was 12,250,000. Approximately one-half of the population is of British origin, one-third of French origin, and the remainder diverse, including German and Ukrainian.

The marriage rate for 1942, the highest on record for the Dominion, was 10.9 per thousand, but it dropped in 1943 to 9.4 per thousand. Births in 1943 were 118,035, at a rate of 24 per thousand; deaths, 118,494, at a rate of 10.1. Infant mortality rate in 1943 was 54 per thousand. War casualties to Aug. 13, 1945, were 102,954, of which 37,964 were recorded deaths.

Apart from a considerable number of private schools, education in Canada is financed mainly by local school authorities and assisted by provincial grants. Nearly three per cent of the young people attend universities. In the 1941 census religious affiliations were listed as follows: 43 per cent Roman Catholic, 19 per cent United Church, 15 per cent Anglican, 7 per cent Presbyterian, 4 per cent Baptist and 12 per cent distributed in smaller denominations.

Expanded Economy. Agriculture, which employed about 25 per cent of the people in 1941, showed production valued at \$2,500,135,000 in 1944. The importance of manufacture increased rapidly during the war and reached an output valued at \$8,733,000,000, according to the latest figures available. Exports, large in 1944, amounted to \$3,439,953,165, while imports stood at \$1,758,898,197 in the same year.

ALZADA COMSTOCK.

CANADA, The United Church of. The designation applied to the single body formed by the union in 1925 of the Congregational, Methodist, and Presbyterian churches in Canada; the Methodist churches of Newfoundland and Bermuda are also included. In the year of 1944 there were in Canada, Newfoundland, Bermuda 6,892 preaching places (including home missions) in 2,730 pastoral charges, 739,079 communicant members, and 1,738,510 persons under pastoral care. A total amount of \$15,018,052 was raised for all purposes. At the Eleventh General Council held in London, Ont., in September, 1944, the Rev. Jesse H. Arnup, B.A., D.D., was chosen moderator for the ensuing biennium. Rev. Gordon A. Sisco, M.A., D.D., is general secretary. Headquarters: 421 Wesley Building, Toronto, Ont.

CANTON ISLAND. An atoll of the Phoenix group (3° to 5°S. and 170° to 175°W.) in the central Pacific which with Enderbury Island of the same group is under the joint control of Great Britain and the United States (Anglo-U.S.A. Pact of Aug. 10, 1938, and Notes of Apr. 6, 1939). Canton is 29 miles in circumference and has a land mass of from 50 to 600 yards wide which encloses a lagoon 9 miles in diameter. Enderbury is 2.5 miles long and 1 mile wide. Canton was a port of call on Pan American Airways' transpacific air service from Honolulu to Auckland, New Zealand, which commenced on July 12, 1940. Early in 1942 United States armed forces were stationed on the island, which became an important link in the air transport route to the battle fronts of the southwestern Pacific and a base for air patrol operations.

CARIBBEAN COMMISSION, Anglo-American. A Commission created by a joint communiqué issued

Mar. 9, 1942, by the British and United States Governments, for the purpose of encouraging and strengthening social and economic cooperation between the United States of America and its possessions and bases in the area known geographically and politically as the Caribbean, and the United Kingdom and the British Colonies in the same area, and to avoid unnecessary duplication of research. The Commission serves in an advisory capacity to the British and U.S. Governments. Members concern themselves primarily with matters pertaining to labor, agriculture, housing, health, education, social welfare, finance, economics, and related subjects. Where the Commission's advice requires administrative action it works with the appropriate British and United States agencies.

The Commission consists of six members. Three are appointed by the President of the United States, and three by His Majesty's Government in the United Kingdom, two of whom have been nominated permanently, the third being appointed *ad hoc* according to the problems under consideration. The United States Section, which is directly responsible to the President, operate as an integral unit of the Department of State.

U.S. Chairman: Charles W. Taussig; British Chairman: Sir John S. Macpherson.

CARNEGIE CORPORATION OF NEW YORK. Established by Andrew Carnegie in 1911, this corporation was formed for the advancement and diffusion of knowledge and understanding among the people of the United States and the British Dominions and Colonies. Its total endowment is approximately \$135,000,000, of which \$10,000,000 is applicable in the British Dominions and Colonies. Its income only is subject to the disposal of the Trustees.

During the year ended Sept. 30, 1945, the Corporation appropriated \$1,002,500 for other Carnegie agencies, for research, study, and publication, and for various purposes of colleges and universities. Of this amount, \$567,000 was devoted to activities connected directly with the war effort, thus making a total of \$2,771,867 granted for such purposes during 1940-45.

The trustees of the Corporation are: Thomas S. Arbutnot, W. Randolph Burgess, Vannevar Bush, Nicholas Murray Butler, Oliver C. Carmichael, William Frew, Henry James, Devereux C. Josephs, Nicholas Kelley, Russell Leffingwell, Margaret Carnegie Miller, Frederick Osborn, Arthur W. Page, and Elihu Root, Jr. Devereux C. Josephs was elected President to succeed Walter A. Jessup who died in 1944; he took office June 1, 1945. Other officers of administration are: Robert M. Lester, Secretary; C. Herbert Lee, Treasurer; and Ernest A. Farintosh, Comptroller. Office: 522 Fifth Avenue, New York 18, N.Y.

Carnegie Endowment for International Peace. Founded by Andrew Carnegie in 1910, the endowment consists of a trust fund of \$10,000,000, the revenue of which is to be administered to hasten the abolition of international war. The work is carried on in three Divisions: (1) Division of Intercourse and Education; (2) Division of International Law; (3) Division of Economics and History.

A special library containing 70,000 volumes on all aspects of public international relations is maintained in Washington. During the fiscal year ended June 30, 1945, the Endowment's income amounted to \$531,443, which included a grant of \$100,000 from the Carnegie Corporation of New York. During this period, the Endowment expended \$558,168, which included expenditures from balances brought forward from previous years. The officers

are: President, Nicholas Murray Butler; Vice President, John W. Davis; Secretary, George A. Finch; Treasurer, Eliot Wadsworth. Administrative offices and the Division of International Law are at 700 Jackson Place, Washington, D.C. The other Divisional offices are at 405 W. 117 St., New York City.

Carnegie Foundation for the Advancement of Teaching, The. A foundation established in 1905 by Andrew Carnegie, who gave an endowment of \$10,000,000 for paying retiring allowances and widows pensions in the United States, Canada, and Newfoundland and for various other purposes in the field of higher education. Incorporated by Act of Congress in 1906, the Foundation received a further gift of \$5,000,000 from Mr. Carnegie and appropriations totaling \$13,250,000 for endowment and reserves from Carnegie Corporation of New York. On June 30, 1945, its resources amounted to \$16,520,039. In 1944-45, it disbursed \$1,879,205 for allowances and pensions. It awards no scholarships or aids of any kind. The Foundation's Annual Reports and Bulletins deal with many phases of higher education. In 1944 its principal studies concerned the educational appraisal of individuals through new-type tests and testing, particularly at the graduate level. Oliver C. Cromwell is President of the Foundation, and Howard J. Savage Secretary and Treasurer, with offices at 522 Fifth Avenue, New York City, 18.

Carnegie Hero Fund. A Fund established in 1904 by Andrew Carnegie to help those who have risked their lives to an extraordinary degree to save human life or to aid dependents of rescuers who have lost their lives in the performance of their acts. The original endowment was \$5,000,000; the amount expended to Sept. 30, 1945, \$6,683,000. Dr. Thomas S. Arbutnot is President and Mr. C. B. Ebersol is Assistant Secretary and Manager of the Fund, the address of which is 2307 Oliver Building, Pittsburgh, 22, Pa.

Carnegie Institute. An Institute located in Schenley Park, Pittsburgh, Pa., founded and endowed by Andrew Carnegie in 1896. It comprises the Department of Fine Arts, The Carnegie Museum, and the Carnegie Music Hall. Thirty-six prominent citizens of Pittsburgh constitute the Board of Trustees. The officers are as follows: William Frew, President; Roy A. Hunt, Vice-President; Augustus K. Oliver, Secretary; Thomas L. Orr, Treasurer.

Carnegie Institution of Washington. An organization founded in 1902 by Andrew Carnegie "to encourage in the broadest and most liberal manner investigation, research, and discovery, and the application of knowledge to the improvement of mankind." Income on investments for the year 1944 amounted approximately to \$1,200,000.

Organization of the normal research program of the Institution remains much as described in YEAR Book for 1941. Due to the war emergency, however, the entire resources of the Institution including laboratory facilities and personnel have been made available to the U.S. Government, and most of the Institution's long-time projects have been temporarily deferred in lieu of war research contracts with the Government. The President of the Institution is the Director of the Government's Office of Scientific Research and Development. Now that the war is over the Institution expects to return to normal ways as soon as possible, preceded by discussion and formulation of future research programs.

W. Cameron Forbes is Chairman of the Board of Trustees of the Institution, and Vannevar Bush is President. Other Trustees are: James F. Bell, Rob-

ert Woods Bliss, Lindsay Bradford, Frederic A. Delano, Homer L. Ferguson, Walter S. Gifford, Herbert Hoover, Frank B. Jewett, Ernest O. Lawrence, Alfred L. Loomis, Roswell Miller, Henry S. Morgan, Seeley G. Mudd, Henning W. Prentis, Jr., Elihu Root, Jr., Henry R. Shepley, Richard P. Strong, Charles P. Taft, Juan T. Trippe, James W. Wadsworth, Frederic C. Walcott, and Lewis H. Weed. Headquarters: Sixteenth and P Streets, N.W., Washington, D. C.

CATHOLIC CHURCH IN THE UNITED STATES. The total Catholic population in the United States, Alaska and the Hawaiian Islands was listed at 23,963,671 in the 1945 edition of *The Official Catholic Directory*, representing an increase of 543,970 over 1944. These areas include the following ecclesiastical jurisdictions: 23 archdioceses, 98 dioceses (including a Greek Rite See and the Ukrainian Greek Catholic Diocese), the Abbatia Nullius of Belmont Abbey in North Carolina, the Military Ordinariate and the Vicariate Apostolic of Alaska.

The Archbishops and Bishops at their annual meeting in November, 1945, elected an Administrative Board of the National Catholic Welfare Conference which organized itself as follows: Archbishop Samuel A. Stritch of Chicago, Chairman of the Board; Archbishop John Gregory Murray of St. Paul, Vice Chairman of the Board and Episcopal Chairman of the Press Department, N.C.W.C.; Archbishop (now Cardinal) Francis J. Spellman of New York, Secretary; Bishop John Mark Gannon of Erie, Treasurer; Archbishop John J. Mitty of San Francisco, Episcopal Chairman of the Department of Catholic Action Study; Archbishop Joseph F. Rummel of New Orleans, Episcopal Chairman of the Legal Department; Archbishop Richard J. Cushing of Boston, Episcopal Chairman of the Youth Department; Archbishop James H. Ryan of Omaha, Episcopal Chairman of the Department of Education; Bishop John F. Noll of Fort Wayne, Episcopal Chairman of the Department of Lay Organizations, and Bishop Karl J. Alter of Toledo, Episcopal Chairman of the Department of Social Action.

Reporting to the meeting of Archbishops and Bishops as Chairman of the retiring N.C.W.C. Administrative Board, Archbishop Edward Mooney of Detroit noted that "some of the most momentous events in history" had taken place in the preceding 12 months, and that the Church in the United States had felt the impact of international developments in two important ways. One of these, he said, was in the matter of relief and rehabilitation of devastated countries and their peoples, and the other was in the sense of responsibility for the establishment of a peace of justice and charity based on the principles laid down by Pope Pius XII. To illustrate the multiplicity of "matters in which our concern has been enlisted during the year," Archbishop Mooney cited repeated criticisms by Moscow on the Vatican and the Catholic Press in the United States; the fate of the Church in Poland, Slovakia, and Lithuania; displaced Lithuanians in France, Ukrainians in Germany, Croats in Italy and Slovenes in Austria; the alleged interferences with the meeting of the German Bishops at Fulda; the fate of Korean Catholics; and the international Catholic relief organization. There was anxious concern, too, Archbishop Mooney said, about numerous and complex problems growing out of "the crescendo of the war effort" at home. Among these, he listed proposed manpower draft, proposed nurses' draft, and the increasing shortages in critical materials vital to Catholic institutions.

Archbishop Murray reported to the meeting that there is an impressive and continuing advancement to be noted in the field of the Catholic Press, and that the N.C.W.C. News Service, founded by the Bishops a quarter of a century ago to serve this press, "has had a powerful part" in it. He said nine U.S. Catholic publications were founded within the twelve months covered by his report, and that the dispatches of the News Service were then going to papers in 32 countries. He said *Noticias Catolicas*, the Spanish-language news service issued by the N.C.W.C. Press Department, is making "notable progress" in Latin-America.

Reporting to the meeting that the Catholic Press is manifesting "a strong willingness to go ahead," Archbishop Murray said the N.C.W.C. News Service is planning to extend, intensify and further coordinate its system of correspondence on the continents of Europe, Asia and America; to strengthen its news-gathering network in continental United States; and to quicken transmission facilities in every way possible. Recounting some of the more important news happenings in the course of the year, Archbishop Murray said Pope Pius XII "more than ever stood out as a world figure," and that the News Service was able to make available to the Catholic Press Vatican documents of enormous historical importance.

Giving a quick glance to the numerous problems confronting Catholic education in the United States during the war years, Archbishop John T. McNicholas, O.P., of Cincinnati, retiring Episcopal Chairman of the N.C.W.C. Department of Education, directed attention to some of the demands that will have to be met in the postwar period. He reviewed the provisions of the Servicemen's Readjustment Act of 1944 and the programs for international cultural cooperation. He said a Treasury Department report had announced that Catholic schools in 92 dioceses had sold more than 65 million dollars in war bonds during the 1944-45 school year.

On the basis of returns from 103 dioceses, Archbishop McNicholas said a 1944-45 statistical survey showed a 3.8 percent increase in the enrolment of Catholic elementary schools over a period of three years. Final results, he added, are expected to show little or no increase in secondary school enrollments, while a loss of 15.5 percent in three years is revealed in the Catholic university and college enrolment figures.

Bishop Alter reported widespread activities on the part of the Department of Social Action, to acquaint the nation with the undertakings of the San Francisco Conference, the Dumbarton Oaks Proposals and the Bretton Woods Agreements. In addition to its normal work, Bishop Alter said, the Department's new undertakings included a Seminar on the Spanish-speaking people of the Southwest; assistance to Archbishops and Bishops of the Southwest in developing a general religious, social, and economic welfare program for the Spanish-speaking, and assistance in negotiations with Catholic organizations in Latin America for a second Inter-American Seminar of Social Studies in Havana. Bishop Alter noted that, due to war conditions, the Catholic Conference on Industrial Problems at Burlington, Vt., was the only one it was possible to hold during the year, but that the Catholic Association for International Peace issued four pamphlets and six committee statements, dealing mainly with international peace, while one of the Association's members prepared a new edition of "Pope Pius XII and Peace, 1939-1944."

Bishop Noll reported that nine national organi-

zations are now affiliated to the National Council of Catholic Men. He said the "Catholic Hour" radio program produced by the N.C.C.M., had been on the air 15 years and at the time for which he reported was being carried over 99 stations. Since the beginning of the "Catholic Hour," he added, a total of 1,967,834 pamphlets, containing 7,455,036 addresses, have been distributed. The newer "Hour of Faith" program, also sponsored by the National Council of Catholic Men, has distributed 122,000 copies of separate talks, the Bishop said. Work on behalf of better race relations occupied an important place on the agenda of the National Council of Catholic Women, Bishop Noll also reported. Completing its 24th year, the Bishop continued, the National Catholic School of Social Service, sponsored by the N.C.C.W., reported an enrollment of 176 graduate students from 29 dioceses, two students each from the Philippines and Panama, and one student each from the Dominican Republic, Brazil and China.

Archbishop Rummel said the effects of a prolonged war on the activities of Catholic organizations have been reflected in the work of the N.C.W.C. Legal Department, which, he said, was frequently called upon to assist Catholic institutions in all parts of the country in their relations with departments and agencies of the Federal Government. The department cooperated with the State and War Departments in matters relating to foreign mission fields, and helped to identify missionaries rescued or released from prison camps.

Archbishop Ryan, reporting as Chairman of the Youth Department on last year's Administrative Board, said the N.C.W.C. Youth Department, fulfilling one of its primary purposes, had represented Catholic interests on various committees and councils in 35 different instances during the year. "It is clear," Archbishop Ryan said, "that the Youth Department is not an agency sponsoring a youth movement nor an over-all authority imposed on existing youth groups or organizations. In the future as in the past five years, the Youth Department will focus its attention on establishing methods for the exchange of information among Catholic youth leaders, in the promotion of an adequate degree of coordination among both youth and their leaders, and proper representation of Catholic interests and policies to national governmental and private youth-serving agencies."

The N.C.W.C. Bureau of Immigration—with a national office in Washington and branches in New York and El Paso—gave assistance to 78,300 persons in 73,892 separate cases during the year, it was reported. One type of appeal received by the Bureau which is expected to increase is for assistance to service men in obtaining the necessary documents to effect the immigration of their foreign wives to this country.

For the first time in history, the Business Office reported that the circulation of N.C.W.C. publications topped the one million mark, a total of 1,003,378 copies of publications being distributed during the twelve months, it was said. "The Bishops Speak Out on World Peace," combining two statements issued by the American Hierarchy, reached a circulation of 457,832 copies.

As a part of the Department of Social Action report, it was stated that the Family Life Bureau of that department held a Family Life Conference at the Catholic University of America, Washington, D.C. The Confraternity of Christian Doctrine launched in 1945 a Crusade of Prayer for the beatification and eventual canonization of Pope Pius X, in commemoration of the fortieth anniver-

sary of his Encyclical Letter *Acerbo Nimis*, which gives directives for the teaching of Christian Doctrine to children and adults, and calls for the establishment of the Confraternity in every parish throughout the world. Despite the difficulties occasioned by the war, more than 700,000 students were enrolled in 8,253 religious vacation schools during the year covered by the report. It was also stated that permission had been granted gratis to 32 publishers to reproduce copyrighted Confraternity texts, and that over 4½ million religious books and articles have been given to chaplains of the armed forces for free distribution.

CENSORSHIP, Office of. An emergency war agency which was created Dec. 19, 1941. Its purpose was to censor communications by mail, cable, radio, or any other means of transmission between the U.S. (or its territories) and any foreign country. The Office was further directed "to coordinate the efforts of the domestic press in voluntarily withholding from publication" news which could not be released without endangering the prosecution of the war. The Director of Censorship was Byron Price. The Office was discontinued Nov. 15, 1945.

CENSUS, Bureau of the. A branch of the U.S. Department of Commerce which serves as the fact-finding agency of the Government. It conducts the decennial census of population, the quinquennial census of agriculture, foreign trade and vital statistics reports, data on local governments, etc. Director: James C. Capt.

CHEMISTRY. During the early months of 1945 chemists and chemical industries were mainly concerned with the intensified war effort. Research was still largely under cover of war secrecy and manufacturing chemists were generally guided, directly or indirectly, by the needs of the fighting forces. The cessation of hostilities has brought a change of viewpoint in chemistry as in other lines of human endeavor. The curtain of secrecy is being raised gradually and information is becoming available regarding some of the progress which has been made behind the scenes during the war years. Not all the developments of this period are yet available, but enough is now known to mark these years as a period of great progress. In view of the extensive and comprehensive advances which have been made, Dr. C. M. A. Stine of the du Pont Company has referred to the world of 1940 as "so distant in the past that it has become antiquity, as seen through scientific eyes."

It has been estimated that United States chemical and allied products in 1944 reached a total of \$8,300,000,000, which is two and one-quarter times the similar production of 1939. We have become so accustomed to seeing production figures of each year outstrip those of all preceding years that we have come to expect new records as a matter of course. Now that the production race has been won some thought is being given to the question: "How long can our abundant natural resources stand the strain?"

Minerals. The U.S. Department of the Interior has attempted to answer this question as it applies to our mineral resources by estimating the number of years that our unmined supply will last if consumption is at the same rate as that of 1935-39. The estimate is shown in Table I. It is quite certain that in the case of some of these materials future consumption will be greater than that of the prewar period. Other estimates have been less optimistic. Iron and steel, which have been called the

most basic of all commodities in the industrial life of the nation, are now dependent upon high grade ore which is rapidly disappearing. Good authority tells us that the present supply of high grade ore will be exhausted in 22 years or less. After this period has been passed recourse must be had to low grade ores which will obviously impair production. During World War II the United States furnished about 60 percent of the total petroleum used, although our known reserves are little more than one-third of the world supply. It is obvious that our natural resources are not inexhaustible. While we have justifiable pride in the splendid production of the war years and the contributions which these supplies have made it is clear that we must cease to be prodigal of our natural resources and inaugurate at once a program of preservation, conservation, and development.

The outstanding chemical events of 1945 are unquestionably connected with the quantity separation of the isotopes of uranium and carbon. Most highly publicized of these processes has been the large scale production of the transuranium elements neptunium (Np, atomic number 93, atomic weight 239) and plutonium (Pu, atomic number 94, atomic weight 239). These steps, together with the fission of the uranium atom, lead directly to the atomic bomb (q.v.) which is destined to have a tremendous influence on the future history of the human race. The separation of the isotopes,

TABLE I—U.S. DEPARTMENT OF INTERIOR ESTIMATE OF THE UNMINED SUPPLY OF DOMESTIC MINERAL RESOURCES BASED ON THE RATE OF CONSUMPTION FOR 1935-39

Years		Years	
Magnesium...	.. Infinite	Gold ..	14
Salt .....	.. Infinite	Lead ..	12
Soft Coal and Lignite ..	4,300	Silver ..	11
Phosphate Rock ..	805	Bauxite ..	9
Molybdenum ..	422	Vanadium ..	7
Anthracite ..	195	Antimony ..	4
Potash ..	117	Tungsten ..	4
Iron Ore ..	111	Platinum ..	4
Sulfur ..	55	Mercury ..	3
Natural Gas ..	48	Asbestos ..	3
Fluorspar ..	40	Manganese ..	2
Copper ..	34	Chromite ..	1
Zinc ..	19	Nickel ..	-1
Petroleum ..	18	Tin ..	-1
Cadmium ..	16	Graphite ..	0

the production of the transuranium elements and the fission of uranium had all been accomplished previously but always on a small scale. The quantity operation and its control required the combined efforts and ingenuities of the largest and most brilliant group of physicists, physical chemists, chemists, physicians, sociologists, and other scientists that have ever been associated upon a single project. For the first time in scientific history elements were manufactured in relatively large quantities. A new scientific era was ushered in, new sources of power were revealed and new problems were uncovered which are likely to dominate the thinking of mankind for years to come in his scientific, social, political, humanitarian, and commercial relationships.

One of the spectacular accomplishments in connection with carrying out the Manhattan Project was the preparation of three tons of pure uranium metal by Dr. H. C. Rentschler and Dr. J. W. Marden of the Westinghouse research laboratory. To meet the sudden call they prepared potassium uranium fluoride, then electrolyzed the fused salt in graphite cells. The output, which had previously been measured in grams, rose to 500 lbs. per day and the cost dropped from \$1,000 per pound to

\$22. The material prepared in this way was used to make the first atomic pile.

It has recently been announced that the heavy isotope of carbon C^{13} is now available in quantity. The carbon of commerce contains only 0.7 percent of this isotope. The use of this heavy isotope as a tracer element will permit the biochemist to follow in exact detail the mysterious transformations in metabolism both in health and in disease. It is probable that such studies will answer many questions concerning nutrition and may furnish clues to the cause and cure of such diseases as cancer, diabetes, and arterial sclerosis.

Metals. The shortage of metals has now largely disappeared. Tin continues to be scarce. On July 1 the stockpile of tin in the United States was reported to be only 95,572 tons, which may be compared to the consumption of 89,500 tons in 1944 when rigid restriction prevailed. The usual estimate is that two years will be required to get an adequate supply of tin from the Far East unless hidden stocks and machinery are discovered. Other estimates, as short as 6 months, are based upon the fact that straits tin is gathered largely by hand labor, so the building of machines is not necessary.

Lead, one of the last of the metals to be placed on the restricted list during the early months of the war, continues to be prominent among commodities which are still scarce. Controls of distribution are expected to be continued through most of 1946. The government stockpile in 1943 amount to 273,000 tons, but early in 1945 it had fallen to 80,000 tons. One of the main difficulties has resulted from labor shortage at the mines. Production in 1945 was in the neighborhood of 400,000 tons, while the consumption was in excess of 1,000,000 tons.

There is also a shortage in antimony, bismuth, cadmium, platinum, and nickel. Mercury has begun to come in again from Spain; the recent mercury battery promises to increase the demand for this metal. The American potash supply seems to be able to meet the demands made upon it.

The light metals aluminum and magnesium which early in the war period were among our greatest worries because of the limited supply, are now so abundant that the problem of their utilization has become difficult. Many of the war-time plants for the production of both metals have been closed and their ultimate disposition furnishes a puzzling problem. Intense study is being made to find new commercial outlets. The predicted three-way commercial competition between alloys of the light metals, steel, and plastics is beginning to appear. It may take some time for these rival materials to adjust themselves completely to the postwar situation where each can find applications for which it is especially fitted.

It has now been revealed that the production capacity for magnesium in Germany in 1944 reached a total of about 70,000,000 lbs. per year, double the estimated capacity of 1939. The enlarged production of aluminum proved to be more difficult on account of the scarcity of bauxite. Small importations of this ore were made from adjacent European countries, and some aluminum was extracted from clay, using the familiar method of extraction with sulfuric acid and then precipitation with the aid of alkali. This process proved to be expensive.

One new use for magnesium which seems likely to require a considerable tonnage and to meet a long felt need is as expendable anodes to furnish "cathode protection" from corrosion to underground pipe lines. Encouraging results have been

obtained from field tests using special magnesium alloy anodes weighing from 16 to 47 lb. These are placed 5-10 feet from the pipe line and are buried in soil which has been conditioned to give the desired resistance. A heavy insulated copper wire gives contact between the pipe and the anode. The anodic oxidation which takes place on the magnesium reduces or entirely prevents the corrosion of the iron. The anodes are expected to last for about 10 years and this period may be extended by further study. This device may furnish a successful solution to one of our greatest and most troublesome corrosion problems.

Lithium (See YEAR BOOK for 1944, pp. 113, 355) continues to attract attention. One of the effects of the insistent wartime demand has been the considerable amount of lithium phosphate which has been separated from the slimes of the soda recovery process at Trona, California. This lithium salt, Li_2NaPO_4 , is difficultly soluble and a special flotation process recovers this salt from the alkaline brine. The finished material contains up to 22 percent Li_2O so it is the richest natural source of lithium now available. During the summer of 1944 the American Potash and Chemical Corporation put into operation at Trona a recovery plant which has quadrupled their former production of lithium salt. The total national production of lithium minerals during 1944 was 14,600 tons, nearly 80 percent more than 1943.

Now that the pressure upon production has been largely relieved, it is permissible to look back briefly to see how far we have really come. The steel trade may be taken as a typical example of the rapid growth of the metal industries. In 1939 the United States produced 47,141,709 gross tons of steel ingots and castings. The industry was highly localized, about 50 percent of the production coming from Pennsylvania and Ohio. In 1945 the total steel capacity was 95,505,280 tons, from 27 of the States. Notable among the new producing States are Oregon and Utah, a significant development for the Pacific Coast industries. The American steel industry is now capable of producing in 1.25 hours as much steel as the country produced during the entire year of 1860. The phenomenal increase in stainless steel production is likewise significant. Allegheny metal, introduced commercially in 1920, grew rapidly in popularity and in 1939 its production was valued at \$17½ million. In 1945 the estimated value reached \$65 million—an increase which is nearly four-fold in six years. The total stainless steel production in 1944 reached a new high of 477,448 net tons, a 4 percent increase over the previous high of 1943.

Medical Chemistry. The year 1945 has seen material development in the production and use of many drugs. For example the United States and Canada now have penicillin plants in operation which cost \$20,000,000 and produce 9 lb. of pure penicillin per day. The first price for penicillin was \$20 per 100,000 Oxford units; in Aug. 1945 the price was said to be 59 cents per 100,000 units. The drug has been released for civilian and veterinary use and a number of new applications have been suggested for it. A new and rapid method of purifying penicillin has been suggested by Drs. E. Cruz-Coke, F. Gonzalez and W. Hulsen, of the University of Santiago, Chile. It consists in filtering through both cathodic and anodic ion exchange resins. The purified product has all the penicillin activity of the original, and is free from toxicity for use with experimental animals and with man.

Rutin (See YEAR BOOK for 1944, p. 116) is now

most effectively obtained from green buckwheat plants, by alcoholic extraction. Clinical studies have been made with several hundred patients. The evidence continues to confirm its effectiveness in reducing increased capillary fragility to normal and to preventing retinal and cerebral hemorrhages which are associated with hypertension.

The U.S. Bureau of Plant Industry reports the successful growth of camphor basil at Beltsville, Md. This plant is an annual which requires about 120 days for growth. It gives a high yield of natural camphor, averaging about 100 lbs. per acre. It is estimated that the national requirements for camphor could be met by the cultivation of from 10,000 to 20,000 acres. Camphor was formerly imported, chiefly from Japan.

Relief for hay fever sufferers, especially the asthmatic complications, is promised in the preparation called adneprhine, put up by Frederick Stearns, Detroit. It is a mixture of neosynephine, aminophylline and phenobarbital. It is available on doctors' prescriptions.

Several new drugs have attracted attention during the year. One of the most promising of these is streptomycin, discovered by Dr. Selman A. Waksman of the New Jersey Experiment Station at Rutgers, and developed by Drs. H. W. Anderson and H. E. Carter of the University of Illinois. It is an antibiotic agent which is a mold product resembling penicillin, but produced by a different variety of mold (actinomycetes). This drug is not expected to replace penicillin but to supplement it, since it acts upon certain bacteria which are unaffected by penicillin. It is the best known drug for treating tularemia and has been effective in treating influenzal meningitis and other diseases. It gives promise also of usefulness in the treatment of undulant fever, intestinal infections, and even tuberculosis. Abbott Laboratories and Merck and Co. are building extensive plants for its production. Another promising antibiotic is subtilin, extracted from *B. subtilis* by Dr. Anthony J. Salle of the University of California at Los Angeles. In test tube experiments it kills tubercle bacillus effectively but is only slightly toxic to living tissue. It also seems to be effective against other disease-producing bacteria. Experiments on animals have not yet been reported.

Phenothiazine is a well-known compound, effective as a livestock remedy, of which the U.S. Department of Agriculture is quoted as saying it is a "wonder drug that kills more kinds of internal parasites in more kinds of animals than any other known chemical." It is an organo-metallic compound which is effective in disinfecting seeds and turf. It is to be manufactured in quantity by the du Pont Co. at their new Houston plant.

Professor R. A. Peters of Oxford, England, has announced the discovery of an effective remedy for arsenic poisoning. It is 2,3-dimercaptopropanol, but since it was first used as a therapeutic agent against the effect of certain war arsenicals, especially lewisite, it is known as bal (British anti-lewisite). This material has been studied intensively during the war both in Britain and the United States. It is effective in treating both the local and systemic action of arsenical war gases and in counteracting certain types of arsenical poisoning in civilian medicine. Preliminary clinical trials in cases of mercury poisoning are said to be "most encouraging."

Two powerful rat poisons have been described and may replace imported poisons which have been very scarce. No. 1080, which is sodium fluoroacetate has been developed by the U. S. Fish and

Wild Life Service in Denver and the Patuxent laboratory in Maryland. It is an inexpensive compound, it is very toxic to rodents; some animals seem to like its taste but others develop a gradual aversion to the water solutions. It is highly toxic to cats and dogs and presumably also to beneficial wild life. The other poison, known as antu, is alpha naphthyl thiourea. It was discovered at Johns Hopkins Hospital, is not distasteful to rats and is fatal to the Norway rats commonly found in the northern sections. It is claimed that it is harmless to man, to dogs and to the black rats of warmer countries. The former poison is manufactured by the Monsanto Chemical Co. and the latter by the du Pont Co. Sales of both poisons are restricted. The shortage of thallium in Germany has stimulated the production of substitutes. Castrix was made from acetoacetic ester and urea. It is very toxic to mice, but only mildly so to domestic animals.

Insecticides and Repellents. DDT has continued to occupy the spotlight. Early in the year it was not available for commercial uses, but on May 29 WPB announced the allocation of a limited amount for use in Oregon against the potato tuber flea beetle. The large scale manufacture of the two main materials used in the preparation of DDT (chloral and monochlorobenzene) was announced by Shawinigan Chemicals, Ltd. at Shawinigan Falls, Quebec. The production of DDT by manufacturers in the United States was estimated in the fall of 1945 to be about 1,500 tons per month. As the insecticide has become more readily available study of possible uses has been made and many new applications have been suggested.

A test for DDT has been announced by H. A. Stiff and J. C. Castillo. It is carried out by heating DDT with anhydrous pyridine solution containing xanthidrol and solid potassium hydroxide. A red color is produced. The test is sensitive to small amounts of DDT, but unfortunately a similar effect is produced by a number of other compounds containing a somewhat similar structure.

Several insecticides similar to DDT have been used. In Germany difluorodiphenyltrichloroethane, called gix, was said to be more effective than DDT, but was much more expensive. The U.S. Department of Agriculture has tested the effectiveness of tetrachlorodiphenyl ethane, to which the name TDE has been applied. In acetone suspensions and when applied as dust, these two insecticides are quite similar, but in fuel oil solutions TDE is definitely more toxic to anopheline larvae. There is still some uncertainty in regard to its manufacture on a large scale.

Other successful insecticides, not chemically related to DDT, have been described. Imperial Chemical Industries, London, England, have found hexachlorocyclohexane extremely interesting. The formula of this compound ($C_6H_6Cl_6$) has suggested the designation 666 as its common name. The gamma isomer, called gammexane, is extremely toxic to some insects. Since the compound is exceptionally stable at high temperatures, it may be sprinkled on a hot surface when it gives an insecticidal smoke. It may also be extended with gypsum and applied as a dust or used as a spray in a water-oil emulsion. Insect pests including locusts, weevils, mosquitoes, and house flies are destroyed. The lethal dose varies considerably but is generally lower than that for other insecticides. Present tests seem to justify the claim that gammexane is about five times as toxic as DDT.

Repellents have also been studied by the Bureau of Entomology and Plant Quarantine. Di-

methy phthalate is effective in preventing the bite of malaria mosquitoes and its use on the skin of man is safe. Its emulsion applied to outer garments gives protection against chiggers for almost a month unless the clothing is laundered or worn in the water. Dimethyl phthalate gives somewhat less effective protection against wood ticks. It has been used in the Allied armies since 1942 but it has not been available for civilian use.

A shark repellent was developed during the war by the U.S. Naval Research Laboratories. The purpose is to allay the fears of men who may be stranded in shark-infested waters. The repellent in briquette form is placed in a diffusion bag which can be attached to a life jacket. Two ingredients are present. One is a new black dye which diffuses and produces an "ink" similar to that in which an octopus or squid conceals itself from shark attack; the other ingredient is a chemical which was discovered in a study of decomposing shark meat. It is extremely offensive to sharks, but inoffensive to man. The use of the repellent makes a man in the water invisible to a shark and the locality repugnant.

New Processes and Products. By spraying 40 or 60 percent sulfuric acid upon the "face" of a turpentine-producing pine tree, the flow of gum is greatly extended and the work of chipping a new face is reduced to less than one-third. During the 1945-46 naval stores season sulfuric acid treatment is to be tried on 50,000 trees in the belief that this practice will prove to be a great advantage in the production of turpentine and rosin.

Maleic and fumaric acids may now be produced by vapor-phase oxidation of the halogenated hydrocarbons which are low-valued by-products of chemical industry. The oxidation is followed by the removal of hydrochloric acid which becomes a by-product of the new process. This method has been devised by Dr. W. L. Faith of Kansas State College and the State University of Iowa.

Two new electrolytic processes have been reported. The electrolytic deposition from organic suspension of vinyl plastics may become useful in preventing the corrosion of metals, in providing electric insulation and in the production of thin-walled plastic articles of intricate shapes. The deposition upon plastics of such metals as gold, silver, nickel, chromium, zinc, cadmium, lead and iron has been accomplished. The plastic so treated has increased strength, resistance to heat and water and the metallic coating is less easily corroded than when applied to a metal base because of the absence of galvanic couples.

A new synthetic wool has been prepared by Imperial Chemical Industries of London, England. The fiber, known as ardil, is manufactured from the protein of peanuts after the oil has been extracted. The fabric is soft, warm to the touch, does not shrink, is not attacked by moths, dyes like wool and absorbs moisture like wool. A ton of peanuts produce about 500 lb. of ardil. It is precipitated as fine filaments through a spinneret. It is expected to be cheaper than wool and is best used in mixture with wool or rayon. From peanut protein also have come some successful glues, with properties which make them useful for gluing purposes for which vegetable proteins were previously considered unsuitable.

Much attention has been given in the textile industries to the production of resin-coated fabrics. A recent development along this line is a vinyl resin-coated voile which is light in weight, strong, and warm to the touch. When made of rayon a square yard of the cloth weighs only two ounces,

yet it is strong and resistant to both wind and water. If nylon is used as the fiber the new voile is very strong. The material takes dye well and attractive colors are promised later when the fabric is available for general use. An extensive line of safety clothing has become available. It is made by coating a special cotton or duck with plastic. It is light in weight and protects against oil, acid, caustic, water, dust, and fumes.

A cotton fabric which resists mildew and rot has been developed at the Southern Regional Laboratory in New Orleans. Cotton is partly acetylated, which relates it somewhat to acetate rayon. The cloth is strong, resembles ordinary cotton in appearance, is not discolored, is not toxic, and has no odor. The fibers will be useful in cloth which will not mildew, and in tents, awnings and fish nets that will not rot when wet. Rotting tests show that the treated material is many times more resistant than is ordinary cotton. This process will be particularly valuable in the tropics where cotton deteriorates rapidly. In the same laboratory there has been developed a new cotton fabric which is suitable for fire hose. It is made by coating the yarn with a cellulose material which swells in water but does not dissolve. When the hose is in use this material swells and closes the small openings between the fibers of the fabric, making it almost water-tight. This process saves both the linen and the rubber lining which have been used in the manufacture of fire hose. The treated material is also expected to be useful in making tent cloth, tarpaulins, and rain-resistant coverings and clothing.

Rust prevention has received extensive study. Two new rust inhibitors have been developed by Carbozite Corporation of Pittsburgh. Both are suggested for indoor use, but will not withstand rain or snow. Carbo-C is inactive toward ferrous and non-ferrous metals including magnesium and aluminum; Carbo-N is satisfactory with ferrous alloys but reacts somewhat with zinc, lead, magnesium and aluminum. Karbate, a corrosion resisting product based upon graphite or carbon, has been produced by the American Cyanamide Co. It is highly resistant to both acid and base. The material is highly bondable, and readily machinable. The Standard Oil Co. of Indiana has developed a series of corrosion preventing lubricants called stanorust. They are made from mineral oil and are non-corrosive, non-gumming and stable against oxidation. Instruments coated with these materials are protected against corrosion during transportation and at destination and are available for immediate use, even at high altitudes or in cold climates.

Sodium chlorite is rapidly gaining popularity as a bleaching and oxidizing agent, in the textile industry. When acidified it liberates chlorine dioxide and in many places it produces a better and more permanent white without loss of strength than does sodium hypochlorite. It does not require such careful control conditions. It does not harm cellulose-acetate rayon and simplifies the manufacturing process. During the past year it has become popular for removing tastes and odors from public water supplies. The Mathieson Alkali Works is doubling the capacity of its sodium chlorite plant at Niagara Falls.

Iron pentacarbonyl is effective as an antiknock agent for ethyl alcohol fuels. A stabilizer may make it suitable for use in hydrocarbon fuels. Care is needed to prevent it from fouling the motor, but it is probably no more dangerous to handle than tetraethyllead.

Synthetic gum benzoin is now available in a

form which is comparable in purity and cost with the natural product from Siam.

Synthetic caffeine is to be manufactured by the Monsanto Chemical Co. in the world's first large plant for the production of this material. The plant is rated at \$1,500,000. The product is not expected for the present to displace caffeine from waste tea, coffee or cocoa, but will make the United States independent of foreign supplies and will insure against future shortages. The synthetic product is expected to have a greater purity than current USP standards. The present production in the United States exceeds 1,000,000 pounds annually. Its main uses are in the preparation of cola drinks and in drug and pharmaceutical preparations. There is a serious shortage in the present supply.

Hydrogen peroxide, 90 percent by weight and in commercial quantities, has been announced by the Buffalo Electro-Chemical Co. Production was begun in 1944 before information was available in regard to the manufacture of this material in Germany. Concentrated hydrogen peroxide of high purity is stable and may be handled without hazard. Its main uses depend upon its active ability to oxidize without leaving a residue. One volume of the liquid will supply over 400 volumes of oxygen gas. It will undoubtedly find many important applications.

The Institute of Paper Chemistry, Appleton, Wis., reports the extraction of a new polysaccharide from the lignin of black spruce. The yield of the purified product is 0.1-0.2 percent of the wood. Analysis of the polysaccharide shows the presence of galactose, arabinose, and uronic acid in molecular ratio of 4:1:1.

Utilization of Waste. The shortage of many essentials has served to stimulate efforts to produce useful materials from those by-products which are commonly referred to as "waste." Many encouraging results have been obtained, a few of which are outlined here.

Lignin has been called "the largest waste in industry"; pulp and paper mills have polluted streams with 2,000,000 tons a year while sawmills and woodworking plants have available wastes which could produce an additional 10,000,000 tons of lignin. Research Associate Robert S. Aries, of Yale University, has now proposed a method of using lignin as a fertilizer to supply humus and organic matter to depleted soils. He estimates that fertilized soils which need humus and organic matter would be improved 20 percent by the use of lignin. Less optimistic is Dr. Harry F. Lewis, Dean of the Paper Institute, Appleton, Wis., who calls attention to the numerous suggestions which have been made for the utilization of lignin and sulfite waste liquor. These suggestions have not been successful in utilizing the bulk of the available material, although some salable products have been obtained in small quantities. Much remains to be learned before these wastes reach their full value for commercial use. A \$300,000 research program has been installed at the University of Washington and in many other laboratories various phases of the problem are being seriously attacked.

The Northern Regional Laboratory of the Department of Agriculture, Peoria, Ill., has been successful in obtaining liquid motor fuel from corn-cobs, bagasse, peanut shells, flax shives, oat hulls and cottonseed hulls. Up to 95 gallons of fuel have been obtained from a ton of corn-cobs or cottonseed hulls; about half of this product is ethyl alcohol. A building in which the process is to be

carried out on a semi-commercial scale is being equipped. It is estimated that 100,000,000 tons of farm waste are available if the process proves to be successful. The cost of the fuel is to be determined later.

The shortage of sugar and carbohydrate crops has stimulated the study of obtaining sugar from wood and other cellulosic waste. Recently a progress report has been made, based upon work done in many localities and from various angles. Most attention has been centered around a modification of the Scholler process in which the wood is digested with sulfuric acid under pressure and at elevated temperatures. The hydrolysis takes place slowly. After a time the solution of simple sugars is withdrawn and may be purified or it may be fermented to form ethyl alcohol. The U.S. Forest Products Laboratory at Madison, Wis., reports the extraction of reducing sugars from such soft woods as Douglas fir, spruce, and southern yellow pine ranging from 45 to 57 percent of the weight of the wood. From hardwoods (oak, maple) 45-52 percent and from turpentine spent chips 35-37 percent were recorded. The alcohol yield per ton of wood ranged from 40 to 60 gallons for soft woods and 33 to 42 gallons for hardwoods. Difficulties were encountered in the fermentation of the wood sugar from Douglas fir. In addition to the main product, several by-products may be obtained and contribute to the success of the project. Tannins up to 5 percent can be obtained from oak at moderate cost. Lignin from 28 to 35 percent of the weight of dry wood is obtained but the lack of a profitable use for lignin is a material handicap. It is probable that bacterial fermentation of the wood sugar to produce such products as butyl alcohol, acetone or isopropanol may be successful in meeting cost problems. The present conclusion is that alcohol from the saccharification of wood is available to meet an emergency, but it alone is unable to compete in cost with alcohol from molasses at 5 cents per gallon. If the price of molasses reaches this figure, then the hydrolysis of wood will not be economically successful unless valuable by-products can be made to assume part of the cost.

Germany. Following the invasion of Germany, intelligence operations were undertaken by the allies to collect accurate data regarding German chemical war activities. A tremendous amount of information has been gathered much of which is not yet available for use. A preliminary report made by the Industrial Intelligence Staff, Chemical Warfare Service, gives a good idea of the extent and importance of these activities in Germany during the war.

The Haber process for the production of ammonia for the manufacture of fertilizers and explosives continued to hold a prominent place in German chemical industry. Synthetic fuel plants were developed rapidly increasing some five-fold during the war. These became a keen competitor of fixed nitrogen plants for the limited supply of hydrogen, which became one of the most critical of war materials. Much attention was given to its production. Apparently the water gas method was most extensively used, although some hydrogen was produced by electrolysis.

Acetylene was another raw material of prime importance. It was made largely from calcium carbide, although some was produced by the arc process. Safe methods for handling acetylene under pressure were devised and are very useful. These permit the use of acetylene at pressures up to 20 atmospheres and temperatures up to 200° C.

Acetylene was used as raw material for the manufacture of a long list of materials such as butadiene, glycerol, acrylic, adipic, maleic, succinic and glutaric acids, erythritol, allyl alcohol, vinyl derivatives, and many others.

Chlorine, a wartime essential, was produced in large quantities. Of particular interest were cells which used mercury cathodes. Some of these under construction at the close of the war were believed to have the largest chlorine capacity in the world. They used 28,000 amperes. Other smaller cells, 16,000 amperes, required 4.5 to 50 volts and had a current efficiency of 94 to 95 percent. One important application of chlorine was its use with acetylene in the manufacture of chlorine derivatives of ethylene.

Most intense general interest was centered around the chemicals used in the propulsion of the rockets. Power was supplied by a fuel and an oxidizer, the reaction taking place at a pressure of 30-40 atmospheres. Many combinations of materials were tested, but the most frequently used combinations consisted of methyl or ethyl alcohol as fuel, and liquid oxygen or a mixture of nitric and sulfuric acids or a concentrated hydrogen peroxide as the oxidizing agent. The large scale production of high purity and stable hydrogen peroxide of 80-85 percent was one of the outstanding accomplishments in chemical manufacture during the war. The persulfate process was mainly employed in production. Concentration was carried out by vacuum distillation in two stages. Two plants in operation had a combined capacity of 1,700 metric tons per month; a third plant was under construction at the close of the war with an estimated capacity of 2,100 tons.

SN 7618 the Latest Anti-malaria Drug. Encouraging reports are received from the Office of Scientific Research and Development concerning its four-year, \$5,000,000 anti-malarial campaign. The search for a satisfactory cure for malaria has been conducted in many laboratories. Some 14,000 compounds have been tested with lower animals and the most promising of these have been tried out on "human guinea pigs," volunteers from penitentiary inmates and conscientious objectors. The most successful results so far have been obtained from the preparation known as SN 7618. Chemically it is 7-chloro-4-[4-diethylamino-1-methylbutyl amino] quinoline. This drug was first made in Germany but the clinical tests there were not promising. Committee of Medical Research investigators arranged for the preparation of this compound by the original method which was tedious and expensive. The product, however, showed promising anti-malarial properties. Drs. C. C. Price and R. M. Roberts of the University of Illinois devised a direct and less expensive method for the manufacture of 4,7-dichloroquinoline, an intermediate which is essential for the production of the drug. They prepared 40 lb. of the intermediate which was used elsewhere for the preparation of the drug. Clinical tests were made in three civilian hospitals and four penal institutions. These studies were conducted under the auspices of various universities. In addition clinical trials were made in Army, Navy, and Marine hospitals. Experiments were also conducted by the Australians and the British and by the International Health Division of the Rockefeller Foundation. Results have been so encouraging that two tons of the drug are being prepared under OSRD contract for distribution for large scale clinical tests in those localities of the world in which malaria prevails. This drug is reported to

be more rapid, more active, and in the small doses necessary for treatment and suppression, it has less disagreeable side effects than quinine or atabrine. It is a cure for the type of malaria known as *falciparum* which is sometimes fatal. It is not a cure for the relapsing type of malaria (*vivax*) but gives relief in a third the time required by quinine or atabrine. A dose of 0.3 gram once a week is sufficient to check the attacks. A second drug, a relative of *plasmochin*, is believed to have curative powers over *vivax*. None of these drugs has yet been released for the use of the general public.

B. SMITH HOPKINS.

CHESS. Promise of the early return of international competition was seen in a radio match between United States and Russian teams in which the Soviet scored a surprising victory by the score of 15-4%. Leading experts of the two countries played simultaneously in New York and Moscow, their individual moves being recorded on huge boards.

Arnold S. Denker of Forest Hills, L.I., retained his national title, Mrs. Gisela Kahn Gresser of New York repeated in women's competition, and Reuben Fine of Washington, D.C., kept U.S. speed honors. Other leading champions of 1945 were: Dr. Alexandre Alekhine, Paris, world; Anthony E. Santasiere, New York, U.S. open; Paul Ellis, New York, U.S. amateur, Samuel Reshevsky, Boston, Pan-American; Mrs. Mary Bain, Miami, and Miss N. Mary Karff, Boston, tied for women's Pan-American; Brooklyn College, Intercollegiate League; and Harvard, H.Y.P.D. College League.

THOMAS V. HANEY.

CHILDREN'S BUREAU. With dramatic suddenness August, 1945, brought the beginning of the postwar period. Children's Bureau services halted by the war could be resumed. Losses that children in the United States had suffered could be faced and dealt with. Child life is interdependent from continent to continent. That American children escaped the ordeal of invasion puts a duty on American adults to help turn the interest of this and other unravaged countries toward immediate help for the uprooted, orphaned, shelterless, starving children of the battlefields. What is done for all children now—or left undone—sets the future of the world.

Policy Making and Research. The National Commission on Children in Wartime, appointed by the Children's Bureau in 1942, is providing the impetus toward progress in services for children. Its report, *Building the Future for Children and Youth*, issued in April 1945, contains detailed proposals for action. To achieve health and social-welfare services of high quality for all children and youth, the Commission urges that Federal and State funds be appropriated in sufficient amounts that each State may reach these goals within 10 years. This means the expansion of existing services for maternal and child health, for crippled children, and for child welfare under the Social Security Act. Programs administered by the Social Security Board having to do with the support of children should be extended and improved and grants of Federal funds made to States to share the cost of assistance to needy families. For youth as well as children the Commission urges Federal aid for education so that full educational opportunities may be assured to all and recommends the strengthening of Federal child-labor legislation to cover current gaps in the protection of child workers. Proposals for State and local community action include work-

ing for a 16-year minimum age for employment and achieving safeguards for adoption. The Commission proposes for immediate study a correlated mental hygiene program; guardianship for children; leisure-time services; and a comprehensive program for American youth.

In the field of research, publication by the Bureau of the Census of data on births and deaths for 1943 has enabled the Children's Bureau for the first time to compare infant and maternal mortality rates over a 10-year period. Although much information on these subjects has been available for a number of years, the first year in which reasonably satisfactory data were available for every State was 1933. Between 1933 and 1943 the maternal-mortality rate declined 60 percent—from 61.9 deaths directly due to pregnancy and childbirth in 1933 per 10,000 live births to 24.5 such deaths in 1943. The infant-mortality rate during the same years dropped from 58.1 deaths of infants under 1 year of age per 1,000 live births to 40.4 in 1943—a decrease of 31 percent.

The provisional birth rate for 1944 was 20.2 per 1,000 population compared with 21.5 for 1943 when births reached a wartime peak. The infant-mortality rate was reduced slightly in 1944—from 40.4 deaths of infants under 1 year of age to 39.8.

Closely allied to research in the children's field and to good infant care is complete and accurate birth registration. The Child Health Day (May 1) campaign for 1945, sponsored also by the Bureau of the Census, had as its slogan "A Birth Certificate for Every Baby in the U. S. A."

A joint committee representing the Children's Bureau Advisory Committee on Maternal and Child Health Services, the American Academy of Pediatrics, and the American Pediatrics Society drew up a report proposing "to make available to all mothers and children in the United States of America all essential preventive, diagnostic, and curative medical services of high quality which, used in cooperation with the other services for children will make this country an ideal place for children to grow into responsible citizens." The American Academy of Pediatrics adopted this report and requested the Children's Bureau and the U.S. Public Health Service to join in a survey in every State to determine the extension of personnel and facilities needed to meet this objective. The study is now in progress.

The Bureau gathered information on the administration and content of school health programs at the request of the State and Territorial health officers. As a result, the Children's Bureau, the Office of Education, and the Public Health Service issued a policy statement regarding the health program needed for school children. The facilities of 20 hospitals were studied with a view to arranging for postgraduate training of doctors and nurses in the care of premature infants. A conference of experts on dental care for children, called by the Bureau in February, 1945, made far-reaching recommendations. In September an adviser on dental services was added to the Bureau staff to develop standards for dental services to children and to serve as adviser on dental-care programs in the States.

In the social-service field of the Bureau's work, Congress appropriated funds for a Bureau study of guardianship laws and practices. The large number of children who require guardianship because they lost their fathers in the war makes deeper and wider knowledge of this subject urgent. In this same field many requests have come for advice on adoption legislation. A serious handicap in building good adoption legislation and practices

throughout the country is the lack of nation-wide statistics on adoption. The Bureau has obtained figures from the States that can supply them. From material from about 20 States, the Bureau estimates that 50,000 children were involved in petitions for adoption filed in the United States in 1944. In the States for which information is available, about one-half the children were being adopted by step-parents or relatives. Approximately one-third were placed independently of social agencies, although these agencies can effectively safeguard the child's rights and his future and the interests of the adoptive parents.

A report, *Changes in Volume of Foster Care, 1933-1943*, published in June, 1945, shows that the most significant quantitative changes between 1933 and 1943 in foster care were the increases in the number of children served by public as compared with private agencies and in the number of children cared for in foster-family homes as compared with institutions.

A Cross Section of Activities. To stimulate cooperation between Federal agencies concerned with youth, an Inter-agency Committee on Youth Employment and Education was set up, with the Chief of the Bureau as chairman. At its first meeting in April, 1945, a program of work was planned on student aid, counseling, and educational and work opportunities. The agencies represented are the Department of Agriculture, Office of Community Services, Office of Education, Social Security Board, War Manpower Commission, and Department of Labor.

In this field of youth employment an important activity is getting young workers interested in returning to school. The number of minors under 18 at work during the school year 1944-45 was estimated as about 3 million. During the summer of 1945 the number rose to nearly 5 million. The Children's Bureau and the U. S. Office of Education have conducted three annual campaigns to help communities get their young people back to school. The 1945 drive is credited with helping to stop the downward trend in high-school attendance (a drop of over a million in the first 3 years of war) by stimulating local efforts to convince young people of the value of education.

The Bureau was called upon for consultation in a variety of child-welfare services. For example, a problem aggravated by the war is that of illegitimate birth. Many unmarried mothers needed social and medical services and their babies needed protection against placement for profit or by well-intentioned but unqualified individuals. Births out of wedlock to wives of men serving overseas created special problems. Difficulties arose for local children's agencies from an acute shortage of foster-family homes, so important in today's child-welfare services.

One of the Bureau's basic bulletins for parents was completely rewritten—*Your Child From One to Six*. The Bureau published *Facts About Rheumatic Fever*, a brief popular bulletin, and *Childhood Mortality From Accidents*, a statistical study, and issued a series of folders on the mental-health aspects of children's eating habits. Four folders in the Bureau's series of advisory standards to aid employers in selecting nonhazardous jobs for young workers were issued in 1945: No. 12 for foundries; No. 13 for the brick and tile industry; No. 14 for the converted paper-products industries; and No. 15 for the slaughtering and meat-packing industry. This series was started early in the war as a result of the great influx of inexperienced 16- and 17-year olds into war jobs.

Federal Child-Labor Provisions. The administration of the child-labor provisions of the Fair Labor Standards Act of 1938 through a program for making certificates of age available for minors in industries subject to the act and through a program of inspection for compliance was continued.

Inspection of establishments producing goods for shipment in interstate commerce disclosed 3,481 establishments (about 8 percent of those inspected) employing minors under 18 in violation of the Federal law, an increase of 19 percent over the year ended June 30, 1944, and more than 100 percent over the previous year. In these establishments 13,289 minors were illegally employed, an increase of 58 percent over the year ended June 30, 1944, and nearly 200 percent over the previous year.

The Bureau revoked four wartime relaxations of child-labor regulations issued under the Fair Labor Standards Act. This action restores completely Child Labor Regulation No. 3 which controls the employment of 14- and 15-year-old children. Hazardous-occupations order No. 5 on the operation of power-driven woodworking machines will no longer contain the emergency exemption temporarily permitting 16- and 17-year-old minors to work on a few of the least hazardous machines.

To spread understanding of the child-labor provisions of the act, Bureau consultants conducted child-labor clinics in many communities for employers and representatives of State departments of labor and of education and of labor unions.

The Supreme Court on January 8, 1945, reversing a decision of the lower courts, ruled that the child-labor provisions of the Fair Labor Standards Act did not apply to the employment of messengers by the Western Union Telegraph Company. This means that telegraph messengers no longer are subject to the minimum-age provision of the Federal act, although they are still subject to State child-labor laws. This decision resulted in a marked rise in the number of employment certificates issued to 14- and 15-year-old children for messenger work.

Grants to States. The programs administered by the Children's Bureau under title V, parts 1, 2, and 3 of the Social Security Act and the emergency maternity and infant-care program continued in operation in all States and Territories except that Utah did not take part in the child-welfare program. Payment to States from Federal funds during the year ended June 30, 1945 were as follows:

Program	State Agency	Payment
Maternal and child-health services.....	Health department	\$ 5,553,000
Emergency maternity and infant care.....	Health department	45,000,000
Services for crippled children.....	Crippled children's agency	3,874,000
Child-welfare services....	Welfare department	1,366,000

Except in the case of emergency maternity and infant care, these sums supplemented or matched in large part State and local funds, and by no means represented the total amounts spent for the programs.

In the program for emergency maternity and infant care a total of 484,000 wives and infants of servicemen were authorized to receive medical, nursing, and hospital care during the year ended June 30, 1945, bringing to 884,000 the number of cases authorized for care since the first Congressional appropriation for emergency maternity and infant care in March, 1943. The funds were used by State health departments to pay doctors, nurses, and hospitals participating in the program for serv-

ices rendered to maternity patients and infants for whom care was authorized. Those eligible were the wives and infants under 1 year of age of servicemen in the four lowest pay grades of the armed forces and of aviation cadets.

The basic services for maternal and child health provided under the supervision of State and local health departments included prenatal clinics, child-health conferences, home-nursing visits, health services for school children, and nutrition, dental, and mental-hygiene programs. Most States managed to maintain existing services in spite of wartime shortages in professional personnel. Some States even started new programs for the care of premature babies or the improvement of nutrition services.

State registers for crippled children showed an increase of 18,500 during 1944, bringing the number registered to 381,906, the largest number since the Social Security funds became available. The number of children admitted to clinics for diagnosis and treatment and to public-health-nursing service increased in 1944; the number admitted to hospitals decreased slightly. Texas transferred its crippled children's services to the State department of health, making a total of 30 States in which this agency administers the program. During the year 1945 the Children's Bureau prepared an outline to help State agencies meet epidemics of poliomyelitis.

The range of services provided under the child-welfare program (title V, part 3), in connection with which the Bureau child-welfare consultants were called on, included development of broad programs of social services for children in local communities, licensing and supervision of foster homes and child-caring agencies; programs for dealing with juvenile delinquency locally (see article on Juvenile Delinquency); services for unmarried mothers; supervision of adoptions; the use of group work; and the drafting of State legislation.

The difficulty of obtaining enough qualified child-welfare workers for local work continued. Reports from State welfare agencies as of June 30, 1945, indicated about 3,700 workers giving some service to children, with more than 1 in 10 paid in whole or in part from Federal child-welfare funds. There were almost 2,000 workers providing direct services to children on a full-time basis, but in many instances the program was limited to foster-care services and did not include services to children in their own homes.

International Cooperation. At the Inter-American Conference on Problems of War and Peace, held in Mexico City in February and March, 1945, the Bureau's Chief acted as adviser to the United States delegation. The important Declaration of Social Principles of America adopted by the conference contains principles fundamental to family life and the security and opportunity that all children should have.

As official adviser to the delegates for the Government of the United States, the Chief attended the International Labor Conference in Paris in October, 1945. The membership of this conference consisted of representatives of governments, employers, and workers of 48 nations. One of the main subjects considered was the protection of children and young workers. Two of the resolutions adopted by the conference had to do with medical examinations for fitness for employment, and restriction of night work in non-industrial occupations, both relating to children and young persons.

The Bureau's Inter-American Unit cooperated with the other American republics in child-health

and welfare services through assignment of consultants to governmental agencies; through collaboration with the American International Institute for the Protection of Childhood with headquarters in Montevideo; through advisory service in connection with the revision of legislation affecting children and young people; and through programs of training in the United States for specialists from the other republics.

KATHARINE F. LENROOT.

CHILDREN'S FUND OF MICHIGAN. A Fund established by James Couzens with a gift of \$10,000,000 in 1929 to promote the health, welfare, happiness, and development of children in Michigan, primarily, and elsewhere in the world. During the fiscal year ending Apr. 30, 1945, a total of \$760,638.44 was expended. Total assets on that date were \$6,513,783.81. Chief officer: Wm. J. Norton, 660 Frederick Street, Detroit, Mich.

CHILE. A republic of South America. Area: 286,396 square miles. Population: 5,237,432 (1943) Capital: Santiago.

Chile varies from 45 to 250 miles in width and its length of 2,660 miles is more than ten times as much as its greatest width. The Andes, a central valley, and coastal ranges divide the country longitudinally, while it is separated latitudinally into the northern mining region, the central agricultural area, and the southern forest and grazing lands. The climate is extremely arid in the north, temperate in the central part, damp and cold in the south.

Government. Under the Constitution of 1925, Chile is a centralized republic of 25 provinces. The constitution provides for a bi-cameral Congress: a Senate of 45 members and a Chamber of Deputies of 147 members. Members of both houses are elected by proportional representation. Congress convenes on May 21 of each year and adjourns on September 18. The President is elected for a 6-year term, and is assisted by a Cabinet of 14 members, of whom one is without portfolio. President Juan Antonio Ríos Morales was elected on February 2, 1942, in a special election made necessary by the death in office of President Pedro Aguirre Cerda, and was inaugurated on April 1 of that year.

The People. The Chileans are predominantly of European descent, with some Indian strains. About 15 percent are mestizos and about 5 percent Indians. The largest foreign element is Spanish, but there are sizable numbers of Germans in the south-central area. Population density per square mile varies from 0.5 in the Province of Aysen to 256.3 in the Province of Valparaíso. More than 80 percent of the people live in the central valley. The largest cities are: Santiago, 984,500; Valparaíso, 263,200; and Concepción, 86,000.

Spanish is the official language, but German is spoken and taught in some communities of the country. The predominant religion is Roman Catholic.

According to official estimates, 76 percent of the adult population of Chile is literate. In 1942, 576,900 students were enrolled in 5,364 primary schools. In 1940, there were 87,265 students in 418 secondary schools, and a total of 6,402 students in the country's 5 universities.

Chile has advanced social legislation which provides pensions for sickness, maternity, and old age, as well as for invalids and survivors. The cost is borne by employers, employees, and the State. The Chilean Social Security Fund, established in

1924, handles the funds, and has accumulated capital of more than 54,000,000 pesos. This is a state corporation, which invests in social welfare projects, workers' houses, model farms, apartment houses, etc.

National Economy. Chile's economic structure rests upon its copper and nitrate deposits. These two products usually compose 70 percent of the total value of exports. In 1938 Chile produced 78.4 percent of the total Latin American output of copper; 36 percent of the total for the Western Hemisphere; and 17 percent of the world output. In 1944 Chile produced 490,441 tons of copper bars, over 1,100 tons more than were produced in 1943. Nitrate sales in 1943-44 totaled 1,050,555 tons, a decrease of some 190,000 tons from 1942-43 exports. In production of iodine, a by-product of nitrate, Chile leads the world, producing 69 percent. Chile is the leading coal producing country in Latin America, and has important deposits of iron ore, which yield normally about 1-500,000 metric tons annually. Because of transportation difficulties, production in 1944 fell to some 17,670 metric tons. Gold and silver are also mined in some quantity.

Chile's most important agricultural crops are: wheat, rice, oats, and barley. Raised in quantity also are corn, beans, peas, lentils, and fruit. Meat, wool, and wines are major products. Leading crop production for the year 1943-44 was: (in metric quintals) rice, 1,498,169; wheat, 9,788,089; oats, 1,141,566; barley, 765,073; (in metric tons) beans, 79,926; lentils, 9,435. In 1944 wine production totaled 314,000,000 liters.

Lack of coking coal, together with such factors as the small domestic market and high cost of credit, have held back industrialization of Chile. What manufacturing there is produces chiefly consumers goods for the home market.

Foreign Trade. Mineral products, principally copper and nitrates, compose Chile's chief exports. Exports of nitrate and iodine in 1944 totaled 976,808 metric tons. But animal products (wool, hides, meat), hemp, fibers, vegetables, nuts, and wines are also exported. In 1943 Chilean foreign trade, including specie, was valued at 1,514,500,000 sixpence gold pesos, of which exports accounted for 877,300,000 and imports for 637,200,000. Mining products exported amounted to 686,423,000 sixpence gold pesos; agricultural products, 61,333,000; animal products, 47,592,000; and food products, 20,974,000. In 1943 the five leading non-mineral commodities exported by Chile were: wool, hemp fibers, rice, sheep hides, and gold bars.

Leading commodities imported by Chile in 1943, listed according to value in sixpence gold pesos were: brown sugar, 54,521,000; cattle, 39,539,000; raw cotton, 17,539,000; wool textiles, 15,387,000; and cotton textiles, 13,382,000. Other significant imports included: spinning cotton and cotton yarn, mineral oil, coffee, maté, and machinery and apparatus.

Before 1940 the bulk of Chilean exports went to the United Kingdom and Europe; since then the Western Hemisphere has become Chile's chief market. In 1944, 46.4 percent of Chilean imports came from Latin American countries, chiefly Argentina, Peru and Brazil; these countries took 20 percent of Chile's exports. The United States provided 43 percent of Chilean imports and purchased over two-thirds of its exports, exclusive of sales "to order."

Events, 1945. Inflation and political differences continued to plague Chile as the year opened.

There was intense political activity during February, in preparation for the March elections at which the entire Chamber of Deputies and half the Senate were elected. The rightists blamed the Government for inflation, the increased cost of living, the large budget, and bureaucracy. The leftist parties claimed that these pitfalls would have been avoided if the Cabinet had been formed entirely from their ranks. On February 9 the Alianza Democrática, composed of all leftist political parties and the labor federation, announced its platform: (1) participation at the peace conference of American countries which had cooperated with the United States, (2) lower living costs, (3) state control of prices on essential imports, (4) rent reduction, (5) aid to the democratic peoples of Spain and Argentina in their struggle for liberation, (6) intensification of the Good Neighbor policy among the American republics.

The election, held on March 4, represented a set-back for the leftists, who retained a slim and doubtful majority in the Chamber and lost control of the Senate altogether. In the Chamber, the rightists won 71 seats: Conservatives, 36; Liberals, 31; Progressive Liberals, 1; Agrarians, 3. The leftist total of 75 seats was divided among: Radicals, 38; Communists, 18; Socialists, 7; Falange, 5; Democrats, 7. One seat was won by an independent. Rightists won 23 Senate seats: Conservatives, 10; Liberals, 10; Agrarians, 1; independent rightists, 2. The leftists got 22 places in the Senate: Radicals, 11; Socialists, 4; Communists, 4; Democrats, 1; independent leftists, 2.

The Cabinet offered its collective resignation on March 5 but President Juan Antonio Ríos rejected it because election returns were still incomplete, and the resignation was not renewed. Speaking at a La Serena agricultural meeting on March 25, Ríos interpreted the election results as meaning that the nation was tired of having political quarrels placed before the national welfare. Asserting the power of the executive, he also outlined policies to maintain democracy and continental unity; a \$22,000,000 public works plan; an \$18,000,000 agrarian plan; an \$8,000,000 housing plan; establishment of a steel industry and other developmental projects. These were apparently intended to take up the slack in employment expected at the end of the wartime demand for copper and nitrates. For the same reason, Chile was interested in the announcement on April 3 that the United States Department of State had promised during the Inter-American Conference on Problems of War and Peace in Mexico City that United States synthetic nitrate plants would not compete with the Chilean industry after the war but would be maintained only for national security.

On April 12, Chile declared war on Japan.

On April 20, Ríos began conferring with party leaders, with a view to forming a political cabinet in place of the non-political one then in office. He offered five ministries to the Radical party, three to the Liberals, one to the Democrats and one to the Agrarians; this would have meant a shift to the right. In a letter to Radical leader Alfredo Rosende, Ríos said: "I only want to ask this grouping for the better solution of the problems which seriously affect the nation." He also outlined a 23-point program which emphasized postwar problems of inflation, public works, industrialization, agricultural development, production, credit, and housing. Negotiations went on for several days but were abandoned on May 1. Ríos's explanation of his failure to form a political

cabinet blamed it largely on the demands of the Liberal and Radical Parties. He added that whatever solution was reached would be taken in accordance with the Constitution, and that the Government would carry out its program legally.

Ríos tried again a few days later and on May 14 a cabinet was sworn in composed chiefly of moderate leftists. The President had attempted to include rightist representatives but they had been unwilling to participate. Five Ministers, including Foreign Minister Fernández and Defense Minister Carrasco, were held over from the previous Cabinet, and the Radical, Socialist, Democratic and Falange Parties were represented. Addressing the opening of Congress on May 21, Ríos said the new Cabinet represented the best possibility of giving voice to the "largest possible political cohesion" under existing circumstances, and he urged that partisan struggles be postponed and expressed optimism over the economic outlook.

The rightists won an advantage when Congress was organized: former President Arturo Alessandri, Liberal, was elected president of the Senate, while Juan Antonio Coloma, Conservative, was chosen to head the Chamber.

Ríos's struggle with the rightist-dominated legislature continued throughout the year. On July 17 he stated that both chambers of Congress had recently infringed upon presidential powers, and "respectfully but firmly" proposed that the legislative and executive branches operate strictly within their constitutional limits. And on August 1, he issued a manifesto "defining concepts on the constitutional scope" of the powers exercised by both chambers of Congress with respect to acts of the executive. This public statement reiterated his note to those bodies on July 17 in which he had indicated that it would be desirable to delimit their constitutional rights in the legislative and fiscal fields. He added that there were new arguments which "oblige me to maintain, with the strongest conviction, my intention of upholding my constitutional interpretation."

The Finance Minister announced on August 30 that the 1946 calendar year budget would total approximately \$259,585,402, with a deficit of \$31,500,000.

Another Cabinet crisis arose in September, on the eve of Ríos's departure for the United States, on an invitation issued by the late President Roosevelt and repeated by President Truman. Under the Constitution, Interior Minister Luis Alamos Barros would serve as Acting President during Ríos's absence, but rightist party leaders opposed him. On September 20 the entire Cabinet resigned to give the President a free hand to appoint a substitute. He asked them to remain at their posts until he had reached a decision. The crisis was solved when Alamos Barros resigned, and Alfredo Duhalde Vazquez took his place as Interior Minister. Duhalde became Acting President when Ríos left on his tour, which took him to a number of other American republics, as well as the United States, on September 28.

During the President's absence, the strike situation, which had been bad all year, became acute. In October, 7,500 workers walked out at the Chuquicamata plant of the Anaconda Copper Co., demanding higher wages and other concessions. Then 5,000 miners at Anaconda's Potrerillos plant staged a sympathy strike, as did 14,500 coal miners, thousands of nitrate workers, and explosive workers in the Loa Valley. The workers rejected an arbitration award, whereupon the Gov-

ernment declared the strike illegal and ordered them back to work. When they ignored the ultimatum, the Government declared the province of Antofagasta an emergency zone; 26 labor leaders were arrested and others went into hiding. A settlement was finally reached, but other strikes, in increasing numbers, broke out during the rest of the year.

Ríos returned home from his six-week trip on November 25 and at once found himself in the middle of another quarrel with the rightist-dominated congress. During his absence, the Chamber of Deputies, voting on strictly party lines, had impeached the Comptroller General, Agustín Vigorena, for alleged laxity in office. Leftists unanimously labeled the impeachment bill a political attack on the Government. Ríos took this view, calling the trial "the most serious act this republic has experienced since the revolution of 1891." "Should the Senate approve the bill," he declared, "it would signify confusion and disorganization in Chile's public administration." But on Dec. 19, the Senate voted impeachment of Vigorena by 23 to 21. It was a hard blow at the embattled Ríos Government.

HARRY B. MURKLAND.

CHINA. A republic in eastern Asia. Capital: Nanking (after V-J Day, Sept. 2, 1945, the Government started to move back the various ministries to Nanking from Chungking, the provisional capital).

Area. Including Formosa but excluding Outer Mongolia, the total area of the Republic of China and its dependencies amounted to 3,975,000 square miles (estimated) of which China proper accounted for 3,263,000 (including Formosa and Kwangchowan).

Population. The estimated population of China, including Formosa and Kwangchowan but excluding Outer Mongolia, was 445,250,000 (based on 1940 figures). For the estimated populations of the provinces of China see YEAR BOOK for 1941, p. 118. Chief cities (with estimated prewar population figures): Shanghai 3,490,000, Peiping 1,556,000, Tientsin 1,292,000, Nanking 1,020,000, Tsingtao 515,000, Canton 861,000, Hankow (including Wuchang and Hanyang) 778,000, Chungking 635,000, Wenchow 631,000, Changsha 607,000, Hangchow 607,000, Weihaiwei 390,000, Foochow 323,000, Soochow 260,000, Amoy 234,000, Ningpo 219,000, Wanhhsien 202,000.

Education. According to available figures in 1941-42 there were 232,145 primary schools and 19,490,000 pupils, 2,606 secondary and vocational schools and 768,530 pupils, and 132 institutions of higher education with a total of 57,853 students.

Religion. With the exception of Christians and Mohammedans, most Chinese practise and profess all three indigenous or adopted religions—Confucianism, Buddhism, and Taoism. The Mohammedans are estimated at over 48,000,000. In 1934 there were 2,623,560 native Roman Catholics and 123 Catholic missions, with a staff of 16,241. The Protestant churches, with 1,130 mission stations and 488,539 communicants in 1932, had 19 colleges, 267 middle schools, and 37,714 students in 1934. The number of Christian missionaries in China declined from nearly 6,000 in 1937 to about 3,600 on June 30, 1941.

Production. In 1945 the estimated output from China proper of cleaned rice was 39,500,000 metric tons, wheat 18,865,000 metric tons. During prewar years, China was the world's leading producer of rice, soybeans, tea, kaoliang, sweet po-

tatoes, millet, and vegetable oils; it ranked second in the output of raw silk and wheat; third in cotton, and was an important producer of corn, tobacco, fruits, vegetables, and cane sugar, as well as being the chief exporter of eggs and tung oil. Wool and mohair are important products.

The principal mineral products of China include coal, antimony, tin, tungsten ore, white alum, arsenic, coke, copper ore, gold, gypsum, iron ore, pig iron, lead ore, crude petroleum, potash, quicksilver, rock and refined salt.

China's rapidly expanding manufacturing industry was disrupted by the war with Japan which started in 1937, but there was a considerable transfer of plants to the free provinces in the west. On June 30, 1944, Free China had a total of 4,346 factories registered with the Ministry of Economic Affairs.

Foreign Trade. In 1943, exclusive of bullion, imports were valued at CN\$3,314,324,000; exports, CN\$164,459,000. The value of the Chinese National dollar (CN\$) was set at US\$0.05 on July 10, 1942. Of the total imports, the United States sent commodities valued at CN\$590,806,000, Great Britain CN\$198,577,000, British India CN\$77,374,000. Of the exports, the U.S.S.R. took commodities valued at CN\$58,705,000, United States CN\$37,007,000, and British India CN\$8,403,000.

Imports in 1943 included dyes, pigments, paints, varnishes, books, maps, paper, wood pulp, cotton piece goods, chemicals, raw cotton, cotton yarn and thread, metals and ores, and armaments. The principal exports included animals and animal products, oils, wax, textile fibers, spices, fuel, stone, tea, raw silk, leather, chemicals, metals, minerals, piece goods, paper, cereals, and beans.

Transportation. Highways traverse China in all directions and internal trade is carried on partly over them and in part over the many canals and rivers. In 1943 there were 78,580 miles of roads in all China. Before the war there were 12,500 miles of railway. Telegraph lines in 1943 had a length of 59,275 miles. In the same year telephone lines had a length of 41,384 miles. A network of 4,500 miles of navigable inland waterways and a new canal linking Shanghai, Peiping, and Nanking are included in a 5-year reconstruction plan announced, on Dec. 16, 1945, by the Chinese National Reconstruction Plan.

Government. The Organic Law of Oct. 4, 1928, revised Dec. 29, 1931, and Dec. 27, 1932, vested the supreme governing powers of the National Government of the Republic of China (inaugurated Oct. 10, 1928) in the National Congress of the Kuomintang (Nationalist Party), acting through the medium of the Central Executive Committee. On Sept. 10, 1943, the Organic Law was revised to provide for the selection and appointment of the President of the National Government and of State Councillors (from 24 to 36) by the Central Executive Committee. The head of the Government is chairman of the State Council. Included under the National Government are five yuan (branches or councils)—Executive, Legislative, Judicial, Examination, and Control. President of the National Government of China and Commander in Chief: Gen. Chiang Kai-shek (elected Sept. 13, 1943; assumed office, Oct. 10, 1943, for a three-year term).

Following the outbreak of war with Japan in 1937 a Supreme National Defense Council (headed by Chiang Kai-shek) assumed direction of all political and military affairs. It included the heads of all party, political, and military organs together

with other members who were nominated by the chairman and approved by the Council.

The Cabinet ministers at the beginning of 1945 were: President of the Executive Yuan—T. V. Soong (Sung Tze-wen); Interior—Chang Li-sheng; Foreign Affairs—T. V. Soong (Sung Tze-wen); Military Affairs—Chen Cheng; Finance—O. K. Yai (Yu Hung-chun); Economic Affairs—Wong Wen-hao; Education—Dr. Chu Chia-hua; Communications—Tseng Yang-fu; Agriculture and Forestry—Adm. Shen Hung-lieh; Social Affairs—Ku Cheng-kang; Food—Hsu Kan; Justice—Dr. Hsieh Kwan-sheng (Sie Kuan-sheng); Overseas China Affairs—Liang Han-chao; Organization—Chen Li-fu; Information—Wang Shih-chieh. See *Events*.

Events, 1945. While the end of 1944 saw China facing her greatest military and economic crisis, the year 1945 saw the country stage a military comeback, prior to Japan's capitulation, which was nothing short of startling. The situation at the end of 1944 was so depressing as to be described by the widely-known writer and authority on China, Pearl Buck, as "China's darkest hour." Secretary of the Navy Forrestal declared at the same time that it would be practically impossible to send sufficient aid to China over the Burma-Ledo roads to save the situation and expressed the opinion that conditions would continue "hopeless until a port could be opened on the China coast through which large quantities of supplies for both military and civilian use could be transported."

Loss of American Airfields. Pessimism in American military circles was due to the loss, in 1944, to the Japanese, of practically a dozen airfields, constructed at great cost of money and manpower, from which it had been hoped that Japan's military set-up on the Continent, as well as on the main islands of Japan could be bombed. Aside from the Japanese penetration of the Chinese provinces of Anhwei, Kiangsi, Hunan, Kwangsi and Kwangtung, the Nipponese had also strengthened their position on the coast between Canton and Shanghai, usually referred to in the dispatches as the most likely areas to be invaded by American land and naval forces. Japan's object was obvious, to block any combined Chinese-American move to establish bases on the Continent from which Japan proper could be bombed.

Stilwell-Chiang Kai-shek Controversy. Japan's success in accomplishing her objective in 1944 was largely responsible for the controversy which developed between Generalissimo Chiang Kai-shek and Gen. Joseph Stilwell, Commander-in-Chief of American forces on the China-Burma-India front. As a result of the controversy, Gen. Stilwell was recalled to the United States on October 28, 1944. (See *YEAR BOOK* for 1944, p. 128.)

Although no official statement was issued from either American or Chinese sources, it was thought that the controversy between the Chinese and American military leaders resulted from profound differences concerning tactics in meeting the Japanese menace in South China. Gen. Stilwell had inaugurated the training and equipment of large Chinese forces in Burma and northern India, which operation absorbed most of the military equipment which was being sent to China by way of India under the Lend-Lease arrangement. On the other hand Generalissimo Chiang Kai-shek had urged that the major portion of Lend-Lease military supplies be sent directly to China over the Himalayan "hump" for the equipment of Chinese troops which were facing the Japanese south of the Yangtze. These troops were in need of arms because most of China's military supplies had been exhausted in

the long war, which began in China proper at Marco Polo Bridge, near Peiping, on July 7, 1937. Gen. Stilwell argued that the training of large Chinese forces for use in the recovery of northern Burma and the reopening of the Burma-Ledo road system, was urgently necessary. The "over-the-hump" air-transport service was incapable of both transporting sufficient supplies to re-equip large bodies of troops in China proper, and also keeping up the flow of supplies for the U. S. Fourteenth Air Force stationed in west and southwest China.

The controversy developed ramifications in China's domestic politics, when it became known that Gen. Stilwell had urged Generalissimo Chiang Kai-shek to withdraw a division of his best troops from Northwest China for use in blocking the Japanese advance on Chungking. The Generalissimo refused to take this action on account of his alleged fear that the Communist Army, which was in rebellion against the Kuomintang-supported Government at Chungking, would take advantage of the situation to engineer a coup d'etat and seize supreme power.

Developments in 1945 (first in northern Burma, where the combined Chinese-American forces, with British-Indian assistance, were uniformly successful; and second, in South China where re-outfitted Chinese troops reoccupied American airbases) indicated that both American and Chinese military leaders had been correct in their main contentions, although differing as to method. It was reported at Chungking on August 8, that General Stilwell had been awarded the "Blue Sky and White Sun" medal, highest Chinese military decoration. The only other foreigner holding the medal is Gen. Claire L. Chennault, former commander of the U. S. Fourteenth Air Corps, based at Kunming. However, Gen. Stilwell announced that he would not accept any decorations from foreign governments.

Generalissimo Chiang Kai-shek made a statement on July 19 in the course of an interview with the correspondent of *Yank*, the U. S. Army newspaper, to the effect that a huge American land offensive on the Continent "would not be necessary in order to defeat Japan." General Chiang said, "Given proper equipment and supplies, the Chinese Army—together with a strong American air force—can defeat Japan on the Continent." Referring to the relative merits of American and Chinese soldiers, General Chiang said, "The American soldier is much better equipped, . . . but the point I wish to bring out is that where it takes \$10 for one American soldier, only \$1 is necessary for ours. . . . We must remember that the Chinese soldier is fighting in his own homeland where he knows the topography better than anyone else . . . he is more suitable to the climate and conditions of fighting; therefore to send American troops where we can employ Chinese troops is not very logical. . . ."

A significant report was issued by Gen. Albert C. Wedemeyer (successor to Stilwell), Commander of American troops in China, on June 29, to the effect that the American Army had flown some 40,000 Chinese troops from Sian, capital of Shensi Province, where they were facing the Chinese Communists, to southeastern China, where they were successful in repelling a strong Japanese force which was driving on Chungking, and later, when they were reinforced with further American-trained Chinese troops from Burma, repelled another strong Japanese force which was moving on Kunming. These actions took place in the late fall of 1944, but had not been made public due to possible repercussions in Chinese domestic politics,

and to the further allegation that General Chiang's refusal to take this action had been responsible for the break with Gen. Stilwell. Gen. Wedemeyer declared that the Chinese armies could be counted on for valuable contributions and stated further that reports published in the United States, alleging that Chinese "war-lords" had hoarded American Lend-Lease materials for the purpose of prosecuting postwar civil conflicts, were entirely false. Gen. Wedemeyer also quoted the Chinese Generalissimo concerning the falsity of such charges which had been spread in the United States by writers sympathetic to the Chinese Communists. In an article published in *Collier's*, Gen. Wedemeyer took serious issue with those who had been criticizing Generalissimo Chiang Kai-shek's conduct of the war and declared, "From what I have seen, I have no hesitation in saying that the Chinese have fought, are fighting, and will keep on fighting until Japan's complete defeat."

Reorganization of the Chinese Army. The reorganization of the Chinese Army reached the point, by mid-year 1945, where some three divisions had been completely equipped with American arms and materiel, according to a radio report from Chungking. An earlier report (Feb. 21) stated that it had been decided to reduce the size of the army by one-third; that many superfluous military organizations would be discontinued, and the scale of pay for both officers and men would be increased from 25 to 500 per cent. The Chungking broadcast stated that under the new scale a full general would receive \$20,000 (Chinese) a month; a colonel \$14,000; a major \$10,000; a captain \$8,000; a lieutenant \$5,000; and enlisted men from \$300 to \$600. The Chinese exchange rate at that time was, US \$1.00 equivalent to Ch. \$500. Some idea of the physical condition of Chinese troops due to inadequate food and medical service was indicated in a statement by Gen. Wedemeyer, that out of a particular group of 60,000 men, some 23,000 were found to be unfit for service. A report from Chungking, through *Reuter* service on July 31, stated that the Sixth Kuomintang Congress had passed a resolution ordering the abolition of all Kuomintang headquarters or so-called "political" agents attached to the various armies.

Chinese War Casualties Heavy. Gen. Chen Cheng, Chinese War Minister, stated on April 25 that China's military casualties from the outbreak of war in July, 1937, to March, 1945, were 3,100,000. An earlier report, March 10, stated that Chinese casualties on the Yunnan-Burma front alone from Oct. 31, 1943 through Feb. 28, 1945, totalled 85,420, of which number 31,602 were killed, 49,731 wounded and 4,087 missing.

Military Situation, January, 1945. According to reports from Chungking (A. P. & U. P.), throughout the last quarter of 1944 and the early months of 1945, the Japanese Navy was busily reinforcing its garrisons at Swatow, Amoy, Foochow, Wenchow, and Hangchow; the last named port being of special strategic importance since it is located at the head of Hangchow Bay and commands the only railway connecting Shanghai with the south-central provinces of Chekiang, Kiangsi, and Hunan, and thence southward through Kwangtung to Canton. Possession of this railway by an invading force landing on Hangchow Bay, would enable a coastal link-up with American and Allied forces in southwest China, Indo-China, and Burma.

Japan's determination to block an Allied landing on the Continent was evidenced in a desperate attempt to establish control over the entire 685-mile Hankow-Canton Railway. By the end of January, the Japanese had all of this important line, with the exception of about 20 miles lying within southern Hunan Province. They had accomplished this by moving south from their major Central China base at Hankow, and northward from their South China base at Canton. Japan's major objective was to open an all-land route southward from Manchuria,

through China to Indo-China and ultimately to Singapore and Burma (See YEAR BOOK for 1944, p. 126). American efforts to hold up the Japanese advance were indicated in a report, on January 30, stating that the Fourteenth U. S. Air Force had destroyed more than 800 Japanese locomotives and had blown up 34 bridges and two tunnels on Japanese-operated lines in China. American Liberators also destroyed docks and warehouses and started disastrous fires at the Japanese base at Hankow.

Japanese Take Canton-Hankow R. R. All attempts to block the Japanese advance were futile, however, as the Japanese succeeded early in February in occupying the entire Canton-Hankow Railway. Shaokwan, the last Chinese stronghold about 75 miles north of Canton, was occupied by the Japanese on Jan. 31.

The Japanese occupation of a railway corridor running through interior China from Hankow to Canton, had the effect of isolating several advanced American air-bases east of the railway. Among these were Suichwan in Kiangsi and Kukong in Kwangtung. It was reported that the Japanese were also making preparations to attack Kweilin, in northern Kwangsi, the most important American air-base in southwestern China besides Kunming. During the attack the Chinese defenders fought with suicidal bravery but were overwhelmed by better-armed Japanese troops. The Japanese were reported to have more than 300,000 troops in central and southern China, with additional reserve units estimated at 200,000 on the islands of Formosa and Hainan. However, the Chinese still had important, though poorly armed troops in the extensive area east of the railway and south of Hangchow Bay.

Japanese Seize Wolfram Center. The Chinese High Command announced on Feb. 6 that the Japanese had occupied Tayu in southern Kiangsi Province and Namying in Kwangtung Province, which, aside from being important U. S. air-bases, were America's chief sources outside of the United States of the important metal, wolfram, necessary in the production of steel. Large quantities of the metal had been flown to the United States. The Japanese also captured Kanhsien, or Kanchow, in Kiangsi Province, another Allied air-base. Maj. Gen. Wedemeyer stated on Feb. 8 that the American and Allied successes in the Philippines and Burma were responsible for Japanese action in stepping up their defense measures in order to block landings on the South China or Indo-China coast. The Japanese had also greatly strengthened their forces on Formosa, where they reportedly had eleven divisions and in addition had constructed twenty-six air bases. Most of the Japanese construction work was being accomplished by thousands of Chinese coolies in forced-labor gangs. The Japanese charged that the Americans were developing bases for Superfortresses at Sian and Lanchow in Northwest China, and at Kweilin in the south.

The Fourteenth U. S. Airforce reported that 334 Japanese aircraft had been destroyed in January, 1945, and that the total of enemy planes destroyed in the China sector since July 4, 1942, had reached 1,255, with an additional 554 probably destroyed. In addition fifteen Japanese ships, with a total tonnage of 13,500 plus eighty-nine smaller river and coastal craft were also destroyed in January, bringing the grand total of enemy shipping sunk, since July 4, 1942, to 409 ships sunk and 169 probably sunk, and 2,961 smaller craft, the total tonnage sunk being 1,950,000. Thirty-two Japanese naval vessels were sunk, twenty damaged, and more than 10,000 craft of less than 100 tons were destroyed.

The Japanese countered in February-March with the capture of a further American air base, at Sincheng, in Kiangsi Province, which had been completed only nine days and was capable of accommodating B-29's. American engineers blew up the runways before evacuating. The Japanese claimed that the capture of the Sincheng base had completely eliminated all Allied air-fields in the Kanhsien-Suichwan area of China. Late in March the Japanese launched a determined drive on the Chinese-held American air bases at Laohokow in Hupeh Province and Nanyang in Honan. Laohokow had long been a thorn in the side of the Japanese as American fliers, operating from this field, had wrought havoc on Japanese communications, especially the Peiping-Hankow and Lung-Hai railways. The Japanese sent three divisions, supported by planes, against the city. The Americans evacuated the base on March 30, after blowing up the runways.

American Armament Being Felt. The fact that American arms and munitions were beginning to arrive in sufficient quantities to enable the Chinese to put up stronger resistance, was indicated in the Chinese defense of Laohokow and Nanyang where some 800 Japanese were killed, and the commanding officer, Lt. Gen. Okua was severely wounded. The rifles, trench-mortars and munitions were flown to Honan on American planes. In addition the

U.S. Fourteenth Airforce had assisted materially by bombing and strafing Japanese lines of communications throughout Honan and east China, extending as far as the coastal ports of Tsingtao and Shanghai, and including the important Japanese bases at Loyang and Kaifeng on the Yellow River.

That the tide was beginning to turn was indicated in Japanese reports early in April that a Chinese offensive was in the making, in which Generalissimo Chiang Kai-shek's newly armed troops with American officers in an "advisory" capacity, would occupy the spearhead. Main dependence, it was reported, was being placed on the Chinese Army, which had been American trained, armed, munitioned and equipped in India and had received practical experience in operations against the Japanese in northern Burma. Most of these troops had been flown "over the hump" of the Himalayas by American planes. The number of troops in the new army was not announced, but correspondents reported its strength as three divisions.

A report by the Central News Agency from Chungking on April 2 stated that the Chinese Army had opened attacks on strong Japanese positions guarding the Hankow-Canton Railway "corridor." The Japanese corridor south of the Yangtze, at the high point of Japanese successes, embraced an irregularly-shaped area resembling a shoe, with the narrow ankle in northern Hunan in the Tungting Lake district; the heel planted on the coast at Hongkong and Canton and the toe resting on the coast along the Gulf of Tongking and extending into French Indo-China. The narrowest part at the "ankle" in northern Hunan, south of Hunan, south of Hankow, was only about 100 miles wide, but the widest portion, resembling the "foot," or "sole" of the shoe, extending more than 600 miles from east to west, was in Kiangsi, Hunan, Kwangsi and Kwangtung. Since the Japanese were already in occupation of the Yangtze Valley, which they had taken over in 1937, they therefore controlled the all-important "rice-bowl" or food-producing areas of the country, where rice is the principal diet. Embraced within this territory were the important Chinese cities of Hankow-Hanyang-Wuchang (popularly known as the "Pittsburgh" of Asia) located on the mid-Yangtze, Ichang, which marked the most western point of Japanese penetration; Nanchang and Changsha, important railway and shipping centers; Siangsiang, Paoking, Hengyang, Chuanhsien, Kweilin, Nankang, Kanhsien, Kiennang, Kukong, Tungnan, Hoyun, Liuchow, Luchen, Vining, all located in Hunan, Kiangsi, and Kwangsi provinces where main or auxiliary American air bases had been located. This left the Chinese Government in more or less precarious hold of a broad indefinite territory to the east embracing parts of Hunan, Kiangsi, Kwangtung, Fukien, Anhwei and Chekiang provinces.

Chinese pressure against the Japanese corridor was strongest at Kweilin, Liucheng and Liuchow on the west and in northern Kwangtung, and western Kiangsi on the east side.

In addition the Chinese had launched a determined drive against Japanese positions in the so-called "invasion" zone of the coastal provinces in Fukien and Chekiang provinces.

Early in April there also was mentioned the increasingly important activities of the Chinese Air Corps, consisting chiefly of Chinese aviators who received their training in the United States. A report on April 2 by Maj. Gen. Claire L. Chennault, commander of the Fourteenth Air Force,

stated that Chinese airmen had bombed Japanese headquarters on the Han River in northwest Hupeh Province and had strafed tank, truck, and troop lines. Chinese planes also attacked the Japanese who were besieging Laohokow, killing many of them. Laohokow was entered by the Japanese on April 10. The Chinese High Command at Chungking reported that the Japanese had lost more than 5,000 killed in the fighting in Honan, and it was hoped that the Japanese threat of an invasion of Shensi Province and even Chungking itself had been frustrated. The U. S. Fourteenth Air Force gave the Chinese strong support in their drive against the Japanese on the Honan-Hupeh sector. Chief Japanese objective in the drive on Shensi, was the American air base at Sian, second most important in China.

General Counter-Offensive. South of the Yangtze, Chinese troops with the help of the U. S. Fourteenth Air Force, blocked another Japanese drive, also pointing toward Chungking, the Chinese wartime capital. The A. P. correspondent called the action, "prelude to a general Chinese counter-offensive," and said that the Japanese were using some 80,000 men in an attempt to capture another important American air base, located at the town of Chihkiang, in Hunan Province. The Japanese had already occupied another American base at Paoking (also spelled Paoching), about 125 miles east of Chihkiang; however the value of Paoking to the Japanese was destroyed by the Fourteenth Air Force which dropped 100 tons of explosives, immediately following the Japanese occupation. It was here that the Chinese used troops which previously had been stationed in Shensi, and were flown to Central China to block the Japanese drive on Chungking. The forces were commanded by Gen. Hu Tsung-nan, one of Generalissimo Chiang's most trusted commanders. Severe fighting also occurred at Wukang, Sinning, Tungkow, and Taohwaping. Chinese reports claimed that a third of the Japanese had been killed or wounded, the killed being estimated at about 6,000. Japanese forces used in this engagement included the 13th, 38th, 68th, and 116th divisions.

According to Gen. Chen Cheng, Chungking War Minister, chief credit for the Chinese victory went to Lt. Gen. Wang Yao-wu, a veteran of both the Shanghai and Nanking battles in 1937.

While these actions were taking place in Central China another Chinese force captured an air base south of Foochow and launched an attack on that city, important port in Fukien Province and long regarded as a possible landing point for Allied troops. The renewal of Chinese military activity along the coast south of Hangchow Bay led to reports that the Japanese had begun a withdrawal from interior South China (excepting the Hankow-Canton corridor) in order to strengthen their position about Hangchow Bay and the Shanghai-Hangchow-Nanking triangle.

U. S. Transport Convoy Sent to China. Interest in the military developments south of the Yangtze was increased by the arrival in Chungking of Lt. Gen. Raymond A. Wheeler, deputy supreme commander of the Southeast Asia Command. Following his arrival there were important conferences at Chungking participated in by Generalissimo Chiang Kai-shek, Gen. Albert C. Wedemeyer, Commander-in-Chief of American forces in China, and Lt. Gen. Daniel C. Sultan, U. S. Army Commander in the India-Burma sector. Shortly following the Chungking conversations it was announced that U. S. service troops, in a huge truck convoy, had been moved to the Burma-China sector from

the Persian Gulf sector, where they had been assisting the Russians by transporting large quantities of American supplies from Persian Gulf ports to the Black Sea area where they were taken over by the Soviet Russians. The convoy forces were commanded by Col. Paul R. Guthrie of Denver. The convoy and its extensive equipment were transported from Iran to Calcutta by sea, and from Calcutta to the Ledo terminus of the Stilwell Road by cars of the Indian National Railways, and from Ledo it rolled under its own power over the reopened highway to Kunming.

Japanese Losses Heavy. Maj. Gen. Robert McClure, commanding officer of the Chinese Combat Command, estimated on May 14 that the Japanese veteran Sixteenth Division had lost about half its strength in the Hunan fighting and that Japanese casualties numbered about 11,000. Gen. Chiang Kai-shek, on May 14 issued an order commending the U. S. Fourteenth Air Force and the Chinese Air Force for their fine record in the Hunan campaign.

The Chinese High Command at Chungking announced on May 27 the capture of the strategically-important center of Nanning, thus cutting the Japanese highway connecting the French Indo-China border town of Langson with the Kwangsi rail junction city of Luichow. Nanning is in southern Kwangsi the head of navigation on the Si (West) River, flowing some 430 miles eastward to Canton. It is about 470 miles south of Chungking, and since it was located at the southern end of Japan's "dream" transcontinental avenue from Manchuria to Indo-China Thailand and Burma, its capture seriously embarrassed the Japanese in their grandiose continental plans. Nanning had also served previously as an American air base. Gen. Chang Fa-kwei, veteran leader of the famous Chinese "Ironsides" or Fourth Nationalist Army, received chief credit for the recapture of Nanning.

A summary of the military situation by the correspondent of the Associated Press at the end of May stated that there was increasing evidence of Japan's withdrawal from South China, with the exception of the important bases of Canton and Hongkong, and the all-important rail-corridor connecting Hankow and Canton, which the Japanese required for evacuation. Important Chinese centers still held by the Japanese at the end of May, several of which had previously served as American air bases, included, Ichang, Wuchang and Nanchang on the south bank of the Yangtze, held by the Japanese since 1937-38, Changteh, Changhsia, Hengyang, Shaoyang, Kweilin, Ishan, Luichow, Canton, on the Hankow-Canton railway or its branches in southwest China. Luichow and Mengshan were recaptured by the Chinese forces on June 6, forcing a Japanese withdrawal along a 100-mile front on the western side of the Hankow-Canton corridor. The Chinese Army spokesman in Chungking claimed that the capture of Luichow, plus the earlier severance of the Japanese corridor into Indo-China had isolated some 200,000 Japanese troops in southeast Asia.

Coastal Advance Keeps Pace. Reports from Chungking in July indicated that the campaign to clear China's coastal areas of enemy troops was keeping pace with efforts of other Chinese armies in western or Free China to eliminate the enemy on that front. According to a map based on Associated Press reports, published in the *New York Times* on July 8, Japanese troops had been withdrawn from practically all of the coastal regions, beginning at Bias Bay, east of Hongkong, nearly to Hangchow Bay, about 100 miles to the south of Shanghai. In addition to the withdrawal from the coast regions, the Japanese also had withdrawn from the interior areas of Kwangtung, Fukien, Kiangsi, southern Anhwei and southern Chekiang. This meant that the coastal ports of Swatow, Amoy, Foochow and Wenchow were in Chinese hands, and the same applied to interior cities of the aforementioned provinces. In addition to the areas between Hongkong and Shanghai, known as "invasion" territory, the Chinese armies had also cleared a large section of Kwangtung Province west of Hongkong and extending to the French Concession district of Kwangchowwan, north of Hainan Island.

On the western side of the "corridor" the Chinese had cleared nearly all of Kwangsi Province of the invaders, and were investing Kanchien and Kweilin, important cities which had served as America's second most important air base, south of the Yangtze. Further south, the Chinese had captured Chennankwan on the border of French Indo-China and were advancing toward the town of Dong Dang on the historic route to Hanoi, capital of Indo-China. Kweilin, with its three American air bases was captured by the Chinese on July 28.

Japanese Air Force Also Withdrawn. Gen. Claire L. Chennault, commander of American air forces in China and also of the Chinese "wing" composed of American-trained Chinese fliers, announced on July 11 that the Japanese air force had also been withdrawn from interior China and that American fliers enjoyed air supremacy in practically all battle sectors of the Continent and of the Pacific war generally. In achieving this "first objective," Gen. Chennault stated that the U. S. Fourteenth Air Force had destroyed more than 2,000 enemy planes in the air and on the ground and had hit more than 2,000,000 tons of Japanese shipping. He said that the main function of American fliers now was to support Chinese ground forces, strafing Japanese lines, bombing supply dumps and disrupting communication lines. He stated that the destruction of Japanese shipping had reduced the Japanese to the point where they could only maintain communications with their forces in Indo-China by means of small vessels and Chinese junks which operated close to the coast at night. He declared that the Japanese were in "bad shape" and "might surrender at any time."

With reference to Japanese communication lines, Gen. Chennault stated that American aviators had destroyed 43 enemy locomotives and had damaged 499 others, and had destroyed or damaged 189 bridges.

Japanese Barbarism. David Chandler, correspondent for the U.S. Office of War Information, stationed in China, said that the Japanese had killed 50,000 Chinese civilians in the Kanhsien area, some 240 miles north of Hongkong. He declared they had slaughtered most of the inhabitants of the region during a six-months occupation of the district. With reference to Kweilin, the once beautiful capital of Kwangsi Province, Mr. Chandler said the Japanese had sacked the city "as utterly as the Romans sacked Carthage." The city previously had a population of 500,000, but was ravaged with a fury comparable with the Nazi action at Coventry, Rotterdam, and Lidice. Kweilin, when reoccupied by Chinese forces was only a vast heap of rubble, stated the OWI correspondent, who reported that for twenty days prior to their withdrawal the Japanese systematically looted and demolished practically every building in the city and even the trees along the streets were chopped down and burned. An AP dispatch from Chungking on August 5 stated that the Japanese had killed 1,000 civilian residents of Ichang on the Yangtze, most of them being killed by "poisonous injections," presumably as a preventative against an outbreak of meningitis.

Headquarters Moved to Kunming. As a result of the new development in the Chinese military situation and the speeding up of deliveries of arms and munitions in the Southwest over the Burma-Ledo roads and the over-the-hump air service, Generalissimo Chiang Kai-shek in February said that the general headquarters for Chinese ground troops had been established at Kunming. The change reflected the change which had taken place in China's long struggle to oust the Japanese from their soil, and also reflected the improvement which had taken place, after almost super-human effort to circumvent the Japanese blockade of China's coast, through the construction of the Burma-Ledo roads, the India-China pipeline and the Himalayan air service.

Hanson W. Baldwin, military strategist of the *New York Times* (July 6), in the course of an analysis of the military situation, said that the "contribution of China to the common cause should not be underestimated. China's belligerency, even though often passively expressed, has tied down a very sizable portion of Japan's army in China and China's guerrillas and regulars—and now her fliers—have added to the constant strain of attrition to which the enemy has been subjected. China has served as a base for our planes, and the refusal of Chungking and Yenan to make terms with Japan has won the admiration of the world and

bolstered the spirit of all the peoples of the East who stood against aggression. . . . China after eight years of war has passed from desperation to the certainty of Japanese defeat. The Japanese retirement from interior China, particularly marked in South China, implies an abandonment of all except vital nodal areas. . . . It seems that the Japanese will attempt to hold the Hongkong-Canton area, the Shanghai area and the north China ports."

China's American-trained Army. Mr. Baldwin attributed much of the favorable turn in China's military situation to the efficiency of China's new army which had been trained at Ramgarh, India, first under the supervision of Gen. Joseph W. Stilwell. This army fought first in northern Burma and then was transferred to China and now was rated as China's best fighting force. After the departure of Gen. Stilwell, the training program was taken over and expanded by Gen. Wedemeyer. According to Mr. Baldwin, the Chinese Training Center, largely staffed with American officers and men, many of them veterans from other war theaters, has six principal training schools, general staff school—a small and simplified edition of our Leavenworth—an infantry-training center, field artillery school, automotive school for drivers and mechanics, Chinese ordnance training center and an interpreters' pool.

The carrying out of reforms in the Chinese Army received the enthusiastic support of both Generalissimo Chiang Kai-shek and Gen. Chen Cheng, War Minister, who arranged for improved rations, pay increases and the creation of a new Ministry of Conscription. Of greatest importance, the Chinese military headquarters, for the first time was able to obtain the enlistment and enthusiastic support of thousands of students. A "join the army" movement resulted in the enlistment of 122,000 young Chinese men and women of secondary or college education, constituting the nucleus of a new Chinese "Youth Army." It was hoped that this group would constitute also the nucleus of a new Chinese army after the war. Although militarily weak and politically divided there were prospects of better conditions in the not too distant future.

Generalissimo Chiang and the Political Situation. Generalissimo Chiang Kai-shek, speaking on the eve of the eighth anniversary of China's war against Japan, declared "We should never forget the mass-slaughter of Nanking (1927) and other cities and the bestial bombing of Chungking. . . . We must follow the trail marked by the blood of the fallen and press the blows to hasten the enemy's doom." General Chiang estimated Japanese casualties on the mainland at 2,521,737 and total Chinese casualties at 3,178,063. Analyzing the figures he said that the Japanese had lost 1,179,774 killed and 1,318,670 wounded and 23,293 captured. Chinese casualties were given as 1,310,224 dead, 1,752,591 wounded and 115,248 missing.

Gen. Chiang's reference to China's newly-trained troops, increased supplies of more effective equipment, and preparations for a new offensive, combined with the fact that Japan had been forced by events in the Pacific to change her position on the Continent from an offensive to a defensive status, indicated unmistakably that China's military comeback played an important part in the decision of the Japanese to capitulate in August.

The People's Political Council at its July meeting adopted resolutions calling upon the Government to (1) improve food and nutrition for the fighting men; (2) arrange for better treatment of soldiers according to actual requirements and

living conditions of localities where they are stationed; (3) provide greater facilities for taking care of families of fallen warriors and erect shrines in honor of martyrs; (4) suppress corruption among fighting forces at the front; (5) improve equipment of the people's self-defense units in Honan, which had cooperated with the regular troops; (6) transfer some of the troops under training in Kansu to other points, and abolish unnecessary military organs.

Political and Economic Reorganization Still Lag. Neither Chinese political reform nor economic improvement kept pace with the improving military situation, according to numerous observers who visited the China front during the eight months of the year which preceded Japan's capitulation.

According to a survey of the China situation in August, just prior to the Japanese capitulation, the rapid increase in the flow of supplies over the Burma-Ledo road system, the India-China pipeline, and the over-the-hump air transport, was rapidly changing not only the military and production picture but the political line-up as well. Among the shifts in the political picture was the resignation of Dr. H. H. Kung as Finance Minister, and Gen. Ho Ying-chin as War Minister. Chen Li-fu, Minister of Education, also resigned. Wang Shih-chieh was appointed Minister of Information and Gen. Chen Cheng became Minister of War. Gen. Ho Ying-chin, former War Minister, became chief-of-staff at the new headquarters at Kunming, where he was assisted by Gen. Robert McClure of the U. S. Army. Generalissimo Chiang Kai-shek resigned his concurrent post of Premier, and T. V. Soong, who had served as Foreign Minister, stationed in Washington, became Premier in Chiang's place. Dr. H. H. Kung also resigned his concurrent post as Vice-Premier, and the place was taken over by Wong Wen Hao, who had served as the head of China's War Production Board, in which position he had been assisted by Donald Nelson, who went to China early in the year with instructions to help China increase her war production just as soon as the new materials began flowing in over the "hump." Chiang Monlin, well known liberal educator and former head of Peiping National University, was appointed Secretary-General of the Cabinet.

Among the political reforms put into effect, most important apparently, was the dropping of Kuomintang Party officials from both the schools and the army, and initiated a further revolutionary change in the nature of political training given students, an importation from Russia when communism was introduced from the U.S.S.R. in 1926-27.

Of greatest importance from the larger standpoint of political unification was the decision of the Kuomintang Congress in May to call a constitutional convention in November, with the object of initiating an elective democracy and the cutting off of the Kuomintang Party from government financial support. The Government also promised that district and provincial people's councils would be elected; that the mass literacy movement would be speeded up and expanded, as also would be the movements to stimulate local self-government and general political reform.

Fourth Political Council and Sixth Kuomintang Congress. The Chinese reference digest, *Contemporary China*, published in New York, contained summaries of two important conferences held in Chungking, which were concerned with governmental policy. The Fourth session of the People's

Political Council was held in July and was attended by 290 delegates, of which number 150 were elected by the provisional assemblies of the provinces and municipalities; 75 were selected from leading cultural and economic institutions; and 65 were chosen from various parties and organizations. The Communist Party was represented by eight members, the National Socialists by five, Youth Party, number not stated, while most of those elected by provincial and municipalities were non-partisan.

The President of the Council, Gen. Chiang Kai-shek, declared at the opening session that China's position in world affairs had been greatly enhanced during the eight years of war; that China was one of the Big Five in the United Nations; that China was striving to create closer cooperation among the United States, Great Britain, Soviet Russia, France and China. Gen. Chiang then informed the members that he had announced in January of this year that a National Assembly would be called to adopt and promulgate a constitution, thus ending the so-called period of "political tutelage." He also stated that when the Sixth Kuomintang Congress was held in May, a resolution was adopted calling for a meeting of the National Assembly. The resolution of approval contained four points:

1. Since the original date for the assembly of the National Constitutional Convention, Nov. 12, 1937, had to be postponed because of the Japanese invasion and the enforced removal of the Government from Nanking, the Council thought that the actual date should not be left open, although it was the consensus of opinion that it should not again be postponed.
2. Membership of the National Assembly or Convention, should have the fullest representation of all classes of people in the country. Since the members elected to the original Assembly, scheduled for 1937, had never met because of the war, and since an election could not be held in enemy-occupied territory, it was thought expedient for the original members to continue at the forthcoming Assembly, but more should be elected, so that all provinces could be fully represented. New delegates should be elected to replace those who had died or turned traitor.
3. When the new constitution has been adopted, the Council hopes constitutional government will be inaugurated as soon as possible.
4. Prior to the convocation of the National Assembly, the Government is to continue to employ all available political means for attaining national unity and solidarity; to insure freedom of opinion, of publication, of assembly, or organizing political societies; to enforce the Habeas Corpus Act; to recognize the legal status of various political parties; to complete the setting up of people's representative organs in all provinces of Free China in order to lay the foundations of local self-government.

Many of the members of the Council expressed anxiety regarding the future situation, due to the refusal of the Communists to participate in the meetings of the People's Council, and to the fact that efforts of the Government to reach a compromise remained at a deadlock. The Council called upon the Government to continue its efforts to settle the issue by political means. The Council then passed the following resolutions concerning domestic affairs:

County Government: The new county system should be carried out completely so as to achieve county autonomy and simplify county government; county representative organs should be established immediately in order to enable the people to supervise their county administrations.

Provincial Governments. Military and civil authorities in the provinces should be separated, and no military man should be permitted to hold concurrently the post of governor or member of the provincial government. Establishment of provincial assemblies should be completed as soon as possible.

Ministry of Interior. Powers of the Ministry of Interior should be increased in order to carry out reforms in internal affairs and eliminate corruption among

officialdom; civil service examinations should be broadened and strictly enforced.

Kuomintang National Congress. The sixth national congress of China's Kuomintang political party, the only legal party in the country, was held in Chungking from May 5 to May 21 and was attended by 731 delegates. Three subjects received major attention: (1) Intensification of the fighting effort by improving coordination of forces between front and rear, army and people, war and production, civil and military affairs; (2) Inauguration of constitutional government and promulgation of a constitution; (3) Improvement of the livelihood of the people through prevention of capitalistic monopolies, elimination of causes of class struggle, achievement of social security, elevation of living and cultural standards and creation of land equalization, inauguration of industrial reconstruction.

The Congress unanimously approved a resolution to call a National Assembly or Convention to adopt and promulgate a constitution. The chief problem concerned with the forthcoming meeting pertained to the election and status of delegates. Due to the impossibility of holding an election, with the enemy in control of much of the country's territory, particularly the industrialized areas of northern, eastern and southern China, it was decided to recognize the validity of delegates elected originally in 1937, with a condition that supplementary elections be held where possible in order to make the forthcoming meeting more fully representative. The original delegates were elected for the Constitutional Assembly called for 1937, but were unable to meet because of the Japanese invasion. Subsequently, the Japanese capitulation in August made it necessary to reconsider the action concerning election of delegates. The Congress adopted a six-point resolution, proposed by General Chiang Kai-shek, outlining revolutionary changes in party policy in preparation for the constitutional assembly:

1. All Kuomintang party headquarters in the armies to be abolished within three months
2. All Kuomintang party headquarters in the schools to be abolished and the Youth Corps in the schools (an organ of the Party) to be taken over by the Government as a youth-training institution.
3. That provisional political councils be established in all counties and municipalities in Free China (within six months) to serve as representative organs; where such councils are already in existence, a provisional provincial political council shall be elected immediately.
4. That laws be enacted governing formation of political societies, giving such groups (outside the Kuomintang) full legal status.
5. All offices of an administrative character, previously functioning under the Kuomintang Party, be taken over by the Government immediately.

On May 17, the Congress passed the following resolution concerning the communist problem:

1. The Congress endorses the policy of the Central Executive Committee in seeking a political solution of the communist problem. The Kuomintang Party continues its policy of working for China's freedom and equality and national unity, through a successful prosecution of the war.
2. The Communist Party, in 1937, at the beginning of the war, pledged itself to support the National Government and obey Government orders. Despite this, however, the Communist Party has persisted in armed insubordination, refused to carry out the military and administrative orders of the National Government. The Government, in the face of strong provocation has maintained a policy of forbearance and spared no effort to preserve national unity.
3. Since the National Constitutional Assembly has been called, for the purpose of inaugurating constitutional government, our efforts to consolidate national unity and insure victory over our efforts to seek a solution of the Communist problem, must be prosecuted with renewed vigor.

4. We hope that the Chinese Communists will not fail to appreciate the difficulties still confronting the nation and make good their pledges of September, 1937. We hold that the settlement of all questions can be reached through peaceful discussion without endangering the prosecution of the war to the end that an amicable settlement will be in the interest of the nation.

Further resolutions were passed concerning the inauguration of constitutional government and administrative matters, taxation, protection of freedom of speech, press, assembly, organization, religion and academic research; equality between the sexes as concerned with economic, social, political and educational activities; protection of unity and independence of judicial powers, simplification of legal procedure, prison reform, protection of the livelihood of prisoners who have served their terms; encouragement of labor organization; treatment of labor improved; cooperation of labor and capital; labor of women and children protected; social insurance, unemployment insurance and promotion of workers' health; employment of discharged soldiers and treatment of families of fallen soldiers; registration of private property of government employees and prohibition of government employees from engaging in private business; farmers' organizations to be encouraged and strengthened, collective farming encouraged, industrialization of agriculture hastened; lands in open places to be taken over by the Government, land ownership by the tillers to be encouraged and lands not cultivated by owners to be taken over by the state; international action to stabilize exchange value of Chinese currency; industries of a monopolistic nature to be operated by the state, others to be handled by private interests, with Government help if necessary; priorities to be granted for development of communications and electric power; Government to undertake program encouraging development of agriculture, textile industry, housing projects, roads, railways, waterways; private enterprises to be encouraged, foreign capital to be encouraged, foreign technical assistance to be welcomed.

Wedemeyer, Chennault, McClure, Nelson, and the Problem of Reconstruction. The American program to relieve China's "darkest hour" revolved about the activities of four men, Lt. Gen. Albert Coady Wedemeyer of Nebraska, Maj. Gen. Claire L. Chennault of Louisiana; Donald M. Nelson of Missouri, and Maj. Gen. Robert McClure, commander of U. S. land troops in China. Of the four, Chennault was more experienced in Chinese affairs as he helped organize and command the famous Flying Tigers, independent American air force which helped China against the Japanese long before the United States became involved in the war in the Orient. The Flying Tigers, later transformed into the Fourteenth Air Force of the United States Army, were the only American combat units in China. The others, numbering only a few thousand, served in innumerable useful capacities as military trainers, transport supervisors, liaison officers, technical assistants, constituting a sort of nervous system for a new Chinese Army. Many of these men actually fought alongside Chinese soldiers, but the responsibility for giving and executing orders rested entirely with the Chinese command.

The program involved utilization to the fullest possible extent of China's sole contact with the outside world, the reconstructed Burma-Ledo Road (renamed Stilwell Road), the India-Burma-China oil pipeline and the American Transport Command's air service over the "hump" of the Himalayas, and in addition the utilization for war

purposes of China's limited and badly crippled industrial establishment, operating old, broken and dilapidated machinery which had been transported inland from Shanghai, Hankow and other coastal and Yangtze Valley ports.

Donald Nelson's Proposal. Donald Nelson, who was sent to China early in the year to make a survey of China's productive capacity reported in May his conviction that China could replace the Japanese in the cheap textile trades by using American machinery and cheap power developed by harnessing the giant Yangtze River. He stated that Dr. John Savage, chief engineer of the U. S. Reclamation Service, regarded as one of the world's foremost hydroelectrical engineers, had reported, following an investigation, that the Yangtze Gorges, between Ichang and Chungking, could be converted into the largest hydroelectrical development in the world. Dr. Savage expressed the belief that the Yangtze Dam could produce 10,500,000 kilowatts a year, twice the present total of TVA, Grand Coulee, Boulder and Bonneville. He thought the production could be accomplished at a cost of \$100 a kilowatt installed as against a cost of American dams of around \$250 a kilowatt installed.

In Mr. Nelson's view, China should devote her immediate attention to the production of simple export items, for which she could receive quick cash returns, and the development of internal transport systems. He thought that the dreams of many of China's engineers concerning the production of airplanes, automobiles and heavy machinery could await the development of industries more immediately necessary. He thought that innumerable small industries could be put into production through joint ownership and operation, utilizing American assistance. Finally, Mr. Nelson recommended that a committee of five or seven practical American businessmen be sent to China to work out a program of economic cooperation between the two countries.

The Foreign Economic Administration in Washington reported on March 10 that it had worked out for China a five-year development program, which included both industrialization and transportation facilities. According to the program China would be provided with 953 industrial plants embracing mining and metallurgy, chemicals and basic processing, manufacture, power, transportation, production, processing and distribution of food, river control and irrigation and construction methods, industrial training and industrial hygiene, research and libraries of technical books. It was stated that the complete program, covering five years, would involve the expenditure of US\$1,000,000,000 for the industrial phase and an additional billion for transportation development. This FEA program had no connection with the recommendations of Donald Nelson.

Chinese Estimates. (For a complete account of China's postwar reconstruction program see *YEAR BOOK* for 1944, pp. 132-133.) Dr. Chi-ling Tung, vice-chairman of China's Foreign Trade Commission, stated in the course of a report issued in July that China's industrialization program for the first five years following the war would require the import of machinery and other materials totalling 3½ billion dollars in American currency. He stated that the reconstruction of China's transportation system, plus new construction would involve an expenditure of US\$1,500,000,000. This would include the building of 6,000 miles of new railways, to be added to the 9,000 odd miles already constructed but largely destroyed in the war. Included in the estimate were also motor roads,

motor equipment and vehicles and radio installations. Industrial equipment would include power plants, water works, flour mills, textile machinery, and machine tools. Other categories would include farm implements and fertilizers, medical supplies and chemicals, cotton and cotton goods, building materials, paper, paints, rubber and metals.

The Chinese hope that their expanded exports to other nations of raw materials and manufactured products will assist them in financing their entire program. Other plans for financing include foreign loans, invisible exports, increased domestic tax revenues. Among the items included in the export program are wood oil, used in the U. S. paint and varnish trade, of which China exported US\$26,000,000 in 1937. It also was thought that China might stage a "comeback" in her export of silk and silk products, due to the natural excellence of China's product, plus improved methods of conditioning for world markets.

A further item of export which China hopes to expand, following the war, is tin, now produced under primitive conditions in Yunnan Province. Chinese trade officials stated that large sums already had been expended in the United States for tin mining equipment, which would enable China to increase both the quantity and quality of her product. Another item which bulks large in China's export economy is hog-bristles, used for brushes. It was thought that improved standardization would enable the Chinese industry to compete with synthetic production abroad.

Chinese production of tungsten and antimony are expected to continue, despite the falling off of war requirements in occidental lands, due to the fact that production in China is far below costs in other lands.

Further items which bulk large in China's exports are embroidered cottons and linens, laces and embroideries, all of which are expected to be increased after the war. Gains also are expected in the export of Chinese skins and furs, feathers, and food products, including tea, eggs, sesame and other seeds, edible and industrial vegetable oils.

Invisible items include funds returned to China by her nationals residing abroad, which amounted to about US\$200,000,000 annually in prewar times, while China's prewar "surplus-capital" was estimated at about US\$500,000,000. Large sums accumulated and invested abroad by Chinese nationals during the war are expected to flow back into China's new industries after the war.

Discoveries of Oil and Iron Deposits. Reports from Chungking in May stated that China's National Geographical Survey had discovered rich oil, iron, and manganese deposits in Northwest China, located chiefly in Kansu and adjoining provinces. It was reported from Washington (Associated Press, April 30) that materials for drilling oil wells and building oil refineries were being shipped into China over the Burma-Ledo Road. According to Ralph K. Davis of the War Petroleum Administration, the installation of modern equipment in China was expected to increase both quality and quantity of China's primitive oil production.

The Chrysler Export Corporation announced in April that it had arranged for the construction in China of a network of truck repair bases to handle the increased truck transportation which had developed following the reopening of the Burma-Ledo roads.

China's Industrialization Vital. According to Howard Coonly, of the U. S. War Production Board, who made a survey of China's industrial prospects, "unless China is industrialized, future safety of

the East is in jeopardy." He said that China's industrialization is confronted by four major difficulties: lack of transportation, electric power, manpower, and raw materials of adequate quality. He said that China only had 6,000 trucks operating in April and that rail transport was practically non-existent, except in Japanese-occupied areas. Lack of modern transportation facilities forces the country to depend on inferior coal and ores and other materials when better products are available in the country, but inaccessible due to lack of transportation. Mr. Coonly assisted the Chinese in organizing a Chinese War Production Board, the first job of which was to pool available power production in industrial centers and control distribution. He expressed the opinion that lack of trained manpower would retard China's industrialization on a mass-production basis "for a long period of time, but it must be accomplished for the welfare of the world."

China Is Vital to America. Dr. Hung-ti Chu, research associate, made the following statement, connected with the Chinese Ministry of Information, in the course of an address in New York:

"Main American interests in China are commerce and trade, with the subordinate interests of religious, educational and philanthropic enterprises. Fundamental American policy is to maintain China's independence, which is essential to peace in the Far East. The American interests in China are supplementary to those of China as China desires to become an independent and strong democratic and modern nation. It is China's fundamental policy to cooperate with and secure assistance from the nations which treat China as their equal in order to reconstruct it and to build a better world order. America's far-sighted Open Door policy bore fruit when American trade with China from 1930 to 1936 exceeded that of China's trade with either Japan or England. In 1930, Japan's trade with China amounted to one-quarter of China's total foreign trade, while the American portion of China's trade only constituted one-sixth. In 1936, the ratio was completely reversed, and American trade with China topped the list. American trade with China stopped altogether following the establishment of Japan's blockade of the China coast and Japan's conquest of Burma. After the war, when China is able to begin her program of industrialization, American capital, goods and services on a large scale will be welcomed in China and the long-promised dream of America's China market will be fulfilled. A period of prosperity for both nations will be brought about by cooperation and mutual trust."

Race Against Time. China's currency situation continued to grow more chaotic in the first half of 1945, despite shipment to China of large quantities of gold bullion from the United States. An article by Henry J. Taylor (*World-Telegram*), who visited Chungking in June, asserted that currency inflation was more violent in the first six months of 1945 than in any earlier period. He said, "Chinese bills are printed and passed now in fantastic denominations—\$1,000 notes being so commonplace as to be picked up by our GIs in the market place and sent home as souvenirs." Dr. John W. Decker, former well known American missionary in China and now a member of the United China Relief organization, who visited Chungking in June, reported that the printing plant where the money was being turned out was the busiest place in the National Capital and that the products of the plant were "expanding in more ways than one."

A report from Chungking by the correspondent of the New York edition of the *Shanghai Evening Post* in August, stated that the official price of gold had been fixed at CN\$175,000 (Chinese national currency banknotes) for one tael, or Chinese ounce, and that American dollars were being exchanged at the all-time-high rate of US\$1 for \$2,500 in Chungking banknotes. O. K. Yui, Finance Minister, said that the Government had absorbed CN\$80,000,000,000 in an attempt to prevent fur-

ther inflation. According to Taylor's report, Dr. Lauchlin Currie, economist formerly on President Roosevelt's staff, who had served in an advisory capacity in financial matters in China, had recommended that American gold bullion be sent to China to bolster the paper currency. This, however, had been unsuccessful up to July, due to the fact that the gold had been "siphoned off" by the flow of China's trade into the hands of the Japanese merchants in the coastal ports. These coastal ports, under Japanese control, were the only source of goods, particularly cotton cloth required by the masses of the population. Mr. Taylor declared that "only true economic relief will come when Chinese Armies and an allied fleet can reopen Chinese ports and restore the flow of international trade."

An article in *Fortune* magazine in August said that present plans to control inflation involved "selling gold to mop up currency of big hoarders and to force their holdings onto the market, and selling textiles to drain off the general excess purchasing power and force prices down." Referring to the causes of the present crisis, *Fortune* said, "It is probable that civilian goods will come to play in Chinese politics and in Chinese resistance as direct, though less apparent, a part as materiel for the Army. For to hang on for eight years of war, China has had to use herself up. Without inflation China could not have carried out a long war; with it her strength to carry it out is measurably sapped. The country suffers; individuals suffer; the intellectuals who cannot get enough rice; the farmer who cannot buy simple blue cotton for his clothes. . . . Production suffers, long-term business operations . . . become difficult. . . . If China—and the U. S.—can fill a modicum of civilian needs, China's odds are good. . . ."

United Nations Relief Plans. A report from London in the New York *Times* on August 10 stated that the United Nations Relief and Rehabilitation Administration was prepared to ship 800,000 tons of supplies to China, just as soon as ports on the China Coast could be opened to international trade. The 800,000 tons, stated the report, would be in addition to some 30,000 tons already being shipped into Southwestern China over the Burma-Ledo Road. Included in the shipments were productive machinery, agricultural equipment, earth-moving machinery for repair of dikes and roads, textile machinery, and some food. Dr. T. F. Tsiang, chairman of the Chinese delegation on UNRRA said that relief and free distribution would be restricted, but that emphasis would be placed on public works which would provide mass employment. He said that public works would include construction and repair of railways, highways, dikes, wharves, and docks, upon which refugees could be employed.

United China Relief Program. Dr. James L. McConaughy, President of United China Relief, stated that the American people sent more than US\$9,500,000 to China in 1944 and that a total of US\$24,855,341 had been spent for China relief since the formation of the organization in 1941. He stated that these funds had made possible numerous relief projects, including medical aid, child welfare, refugee relief, and the training of medical workers.

Extensive Project in Szechuan. A report from Chungking stated that work had been started on the most extensive irrigation project ever undertaken in northwestern China. The project involved the irrigation of some 14,000,000 acres of land, mostly located in the valley of Ya, or Chenyi River. Some 1,800,000 inhabitants of the valley will benefit

from the plan, through an expected increase of rice production amounting to 14,000,000 tons.

China Received US\$362,000,000 Through Lend-Lease. Total lend-lease negotiations to all United Nations amounted to US\$41,208,000,000, to the end of May, 1945, of which China received goods amounting to \$362,000,000, according to a report of Leo Crowley, Foreign Economic Administrator, made public in Washington on Aug. 21. Russia received \$10,000,000,000 and Great Britain \$29,000,000,000, France \$510,000,000, American republics \$336,000,000, and other countries \$1,000,000,000.

It was not stated how much of the \$5,500,000,000 in reverse lend-lease came from China.

Maj. Gen. Hurley's Resignation. As a result of charges made before the Senate Foreign Relations Committee by Maj. Gen. Patrick J. Hurley that his attempts to bring about unification in China between the National or Kuomintang Government and the Chinese Communists, was being sabotaged by elements in the State Department, President Harry Truman made, on December 15, an extended statement concerning American policy in China.

The President's statement was made shortly following the departure for China of General of the Army George C. Marshall, who was appointed Special Presidential Envoy in place of Ambassador Hurley, who resigned on November 26. The President declared his and the U. S. Government's belief "that a strong united and democratic China is of the utmost importance to the success of the United Nations Organization and for world peace." On the other hand a disorganized and divided China "is an undermining influence to world stability and peace, now or in the future."

Continuing, the President declared that events "in this century" have indicated that a breach of the peace "anywhere in the world" threatens the peace of the entire world. The U. S. Government therefore believes it essential that:

1. A cessation of hostilities between the armies of the National Government and the Chinese Communists and other dissident armed forces, be arranged for the purpose of completing the return of all China to effective Chinese control, including the evacuation of Japanese forces.

2. A national conference of representatives of major political elements be arranged to develop an early solution to the present internal strife—a solution which will bring about the unification of China.

There followed a reference to the aims of the Cairo Conference in 1943, the Potsdam Declaration of July, 1945, and the Sino-Soviet Treaty and agreements of August, 1945, "all of which were committed to the liberation of China, including the return of Manchuria to Chinese control."

The President said that the United States had assumed a "definite obligation in the disarmament and evacuation of Japanese troops" and that the U. S. Marines are in China for this purpose. The United States recognizes and will continue to recognize the National Government of China and will cooperate with it in international affairs and specifically in eliminating Japanese influence. Therefore the United States is convinced that a prompt arrangement for the cessation of hostilities is essential . . . the United States will not extend military intervention to influence the course of any internal Chinese strife.

The U. S. believes that peace, unity and democratic reform in China "will be furthered if the basis of the present one-party Government is broadened to include other political elements in the

country, "hence the United States strongly advocates that a national conference of major political elements in the country agree upon arrangements which would give those elements fair and effective representation in the government."

The U. S. Government also recognized that the existence of autonomous armies such as that of the Communist Army is inconsistent with, and makes impossible, political unity in China. Therefore, with the institution of representative government, autonomous armies should be eliminated as such and all armed forces in China be integrated effectively into the Chinese National Army.

In concluding the President expressed the belief that China "has a clear responsibility to the other United Nations to eliminate domestic armed conflict which constitutes a threat to world stability and peace." The United States "would be prepared to assist the Chinese National Government in every reasonable way to rehabilitate the country, improve the agrarian and industrial economy, and establish a military organization capable of discharging China's national and international responsibilities for the maintenance of peace and order."

To this end the United States would be prepared to give favorable consideration to China's request for credits and loans under reasonable conditions for projects which would contribute toward the development of a healthy economy throughout China and healthy trade relations between China and the United States.

Maj. Gen. Patrick J. Hurley's charges mentioned specifically certain "career" officials of the State Department whom he charged with sabotaging American policy in China, a policy which had been set by the late President Franklin D. Roosevelt. He said that these officials belonged to "cliques" which supported British imperialism in Asia on the one hand and those who supported Russian Communism on the other. Among those mentioned who allegedly supported the Chinese Communists were John Service, John Carter Vincent and George Atcheson. He charged that some of these officials "had even advocated that a portion of U.S. lend-lease and UNRRA supplies be turned over to the Chinese Reds." In a public hearing before the Senate Foreign Relations Committee on Dec. 5 Maj. Gen. Hurley charged that certain officials of the Embassy in Chungking "were attempting to destroy the control government of Generalissimo Chiang Kai-shek."

Big Three On China. The Conference of the Big Three in Moscow in late December, 1945, issued the following statement: "With regard to the situation in China, they were in agreement as to the need for a unified and democratic China under the National Government, for broad participation by democratic elements in all branches of the National Government and for a cessation of civil strife. They reaffirmed adherence to the policy of non-interference in the internal affairs of China."

After several conversations between Secretary of State Byrnes and Mr. Molotov concerning Soviet and American troops in China, Mr. Molotov stated that the Soviet forces had disarmed and deported Japanese troops in Manchuria but that withdrawal of Soviet forces had been postponed until February 1st at the request of the Chinese Government.

Mr. Byrnes pointed out that American forces were in North China at the request of the Chinese Government, and referred also to the primary responsibility of the United States in the implementing of the terms of surrender with respect to the

disarming and deportation of Japanese troops. He stated that American forces would be withdrawn just as soon as this responsibility was discharged or the Chinese Government was in a position to discharge the responsibility without the assistance of the American forces. The two foreign secretaries were in complete accord as to the desirability of withdrawal of Soviet and American forces from China at the earliest practicable moment consistent with the discharge of their obligations and responsibilities.

Three-Point Plan. The final act in the Chinese political drama in 1945 was the proposal by the National Government of a "Three-Point Plan" for cessation of civil war. The plan proposed (1) that all hostilities cease and that broken railway communications be restored; (2) that the Government and the Communists immediately appoint representatives to confer with General Marshall on procedures to be adopted in all matters pertaining to cessation of hostilities and restoration of communications and (3) the Government proposes the elections of a military People's Political Council to inspect the military and communications situations in areas of conflict and to look into other matters having to do with the restoration of peace.

The Generalissimo declared that the Government would use "every possible peaceful means to solve internal conflicts."

Generalissimo Chiang Kai-shek sent his eldest son, Chiang Ching-Kuo, as a personal "good will" envoy to present a personal message and greetings to Premier Stalin. Since Generalissimo Chiang's son has been the National Government chief representative in Manchuria it was thought the message concerned the situation there.

Truce and Domestic Reforms. Generalissimo Chiang Kai-shek, President of the Chinese National Government, on January 10, 1946, proclaimed a truce in the domestic civil "war" with the Chinese Communists and at the same time issued an order for a sweeping set of political and democratic reforms. The Truce Plan had the approval of General George C. Marshall and the official representatives of both the National Government and the Chinese Communist regime at Yen-an. (For historical description of Chinese Communists, see CHINA, YEAR BOOK for 1944.)

The truce agreement, according to official announcement of Gen. Chang Chun, representative of the National Government and Gen. Chou En-lai of the Communist regime, included the following points:

1. All hostilities to cease immediately.
2. Except in certain specific cases, all movements of forces in China shall stop immediately; exceptions may include movements necessary for demobilization, redistribution, supply, administration, and local security.
3. Destruction or interference with all lines of communication shall cease and obstructions or interference with communications shall be removed.
4. An Executive Headquarters shall be established immediately at Peiping for the purpose of carrying out the agreements for cessation of hostilities. The headquarters shall consist of three commissioners, one representing the National Government, one the Communist group and one the United States of America.

Stipulations concerning cessation of hostilities are understood (1) not to interfere with military movements south of the Yangtze or for the execution of the plan of military reorganization of the National Government; (2) cessation of hostilities shall not interfere with or prejudice military movements of the National Army into or within Manchuria for the purpose of restoring national sovereignty; (3) lines of communications are understood to include postal communications; (4) any military movements covered by the foregoing stipula-

tions shall be reported daily to the Executive Headquarters in Peiping.

American participation within the Headquarters shall be solely for the purpose of assisting the Chinese members in implementing the order for the cessation of hostilities.

Generalissimo Chiang's Far Reaching Reforms. Reforms announced by President Chiang Kai-shek, simultaneously with the announcement of the truce, included the following:

1. Steps to insure freedom of person, of conscience, of publication and of assembly.
2. Abrogation of secret police activity in assuring that rulings were being made under which only proper judicial and police authorities would be permitted to arrest, try or punish individuals.
3. Equality of "all legal parties before the law" and their right to open activity "within the law."
4. Release of all political prisoners "except traitors and those found to have committed definite acts injurious to the Republic."
5. Promotion of local self-government everywhere, with popular elections to be held "according to law" and from "the lowest strata upward."

The three Commissioners in charge of the Executive Headquarters in Peiping will include: National Government, Gen. Cheng Chien-min, head of intelligence department of Board of Military Operations; Communists, Lieut. Gen. Yeh Chien-ying; American commissioner, Walter G. Robertson, U. S. Charge d'Affaires in China. Each commissioner will have approximately 100 officers and men under the Headquarters. The American personnel will be headed by Col. Henry A. Byroade, who will serve as Mr. Robertson's executive officer.

General Marshall said the truce agreement represented the "earnest desire manifested by both sides to find a practical solution to the difficulties during the negotiations." Generalissimo Chiang, in a speech before members of the Political Consultative Commission of thirty-six members, declared, "We must consider a fundamental plan leading from war to peace and from resistance to reconstruction." He urged the Conference to see that the National Assembly is convened according to schedule and declared, "We must try to eliminate by means of consultation and concerted endeavors, all the factors that are likely to impair the unity of the national will, exert an influence adverse to social peace and stability or delay the work of national revival. . . . I am ready to accept all the decisions of the Conference if they are beneficial to national reconstruction and tend to promote the popular welfare and can help the democratization of the country."

JOHN B. POWELL.

CHRISTIAN SCIENCE. A system of metaphysical or spiritual healing set forth by Mary Baker Eddy in her textbook of the Movement, *Science and Health with Key to the Scriptures*, first published in 1875. The first church was established by Mrs. Eddy in Boston in 1879. In 1892 it was reorganized as a voluntary religious association, known as The First Church of Christ, Scientist, in Boston, but called more frequently by its adherents "The Mother Church." The total number of recognized branches of The Mother Church in the United States reported for the fiscal year ending May 31, 1944, was 2,178, and there are also 66 college and university organizations. Total branches for the world, 2,870.

The affairs of The Mother Church are administered, under the Church Manual by Mary Baker Eddy, by a board of directors which supervises the work of the board of education, board of lectureship, and Committees on Publication. The board of education instructs and authorizes students to teach Christian Science. The board of lectureship

consists of 25 members who are engaged in delivering free lectures on Christian Science.

The Christian Science Publishing Society, whose affairs are administered by a board of trustees, also according to the church by-laws, issues the daily paper of the organization, *The Christian Science Monitor*. Other periodicals include *The Christian Science Journal*, *Christian Science Sentinel*, *Christian Science Quarterly*, and four editions of *The Herald of Christian Science*, in the German, French, Dutch, and Scandinavian languages, each with the English translation opposite, and in Braille.

Mrs. Myrtle Holm Smith is president of The Mother Church for the year 1945-46. Headquarters are at 107 Falmouth Street, Boston, Mass.

CIVIL AERONAUTICS ADMINISTRATION (CAA). A branch of the U.S. Department of Commerce which encourages and fosters the development of civil aeronautics and air commerce; encourages the establishment of civil airways, landing areas, and other air navigation aids and facilities; designates Federal airways and acquires, establishes, operates, and maintains air navigation facilities along such civil airways and at landing areas; makes provision for the control and protection of air traffic moving in air commerce; undertakes or supervises technical developmental work in the field of aeronautics; plans for the development of aeronautical facilities; and maintains and operates the Washington National Airport. The Administrator also enforces the civil air regulations (excepting the functions of the Civil Aeronautics Board, q.v.).

The locations for the construction or improvement of airports under this program are selected on the basis of their importance to national defense and to future civil aviation. The Administration advises the War and Navy Departments on the disposition of surplus war airports and State and local units of government on airport site selection, planning, development, and maintenance.

The Federal Airways System, which has been extended throughout Alaska, is being further expanded and improved to provide the type of dependable communications service and air navigation facilities required for the successful conduct of military operations in that area. Installations in Hawaii and the Pacific Islands, as well as in the Caribbean area, are now proving their military value. The Federal Airways System now comprises a network of more than 40,000 miles of "highways of the air."

Development work is proceeding in the fields of very high frequency communication and directional guidance facilities; monitoring equipment; flutter and vibration of aircraft components; engine nacelle fires; airport design and construction; soil testing and stabilization; airport lighting; obstruction marking by radio; traffic control; instrument landing systems; and aeronautical charts.

Theodore Paul Wright succeeded Charles I. Stanton as Administrator on Aug. 22, 1944.

CIVIL AERONAUTICS AUTHORITY. A division of the U.S. Department of Commerce. Its functions are discharged by the Civil Aeronautics Administration and the Civil Aeronautics Board (q.v.).

CIVIL AERONAUTICS BOARD (CAB). A five-man non-partisan board organized independently within the U.S. Department of Commerce. It prescribes safety standards and regulations and has the power to suspend and revoke safety certificates, regulates air carriers, makes accident rulings and recommenda-

tions, and investigates accidents. Chairman in 1945: L. Welch Pogue.

CIVIL AIR PATROL (CAP). Formerly an agency under the OCD, established in 1941 to organize a volunteer corps of civilian airmen to aid in wartime tasks; transferred to the War Department in 1943 to be operated as an auxiliary of the Army Air Forces.

CIVILIAN DEFENSE, Office of. Adhering to the trend started during the last six months of 1944, the U. S. Office of Civilian Defense continued to curtail its programs and personnel in 1945. The sustained favorable progress of the Allied military forces made possible the termination of the Office of Civilian Defense as a Federal organization on June 30, 1945. The U. S. Office of Civilian Defense established on May 20, 1941, by Executive order of the President, thereby became the first war agency to cease its activities. By the date of termination the staff of the Office consisted of fewer than 100 persons, including military personnel on detail to the agency. In authorizing the abolition of the Office of Civilian Defense, the President stressed that the States and local governments should continue the activities of civilian defense volunteers in the local communities.

To perform its responsibilities under the May 20, 1941, Executive order as amended, the Office of Civilian Defense was organized during 1945 into the Divisions of Protective Property, Protection Services, Federal-State Cooperation, and Industrial Protection. Briefly, these responsibilities were: (1) to assure effective coordination of Federal relations with State and local governments; (2) to provide for necessary cooperation with State and local governments in respect to measures for adequate protection of civilian population in emergency periods; (3) to facilitate constructive civilian participation in the war program. The Protective Property Division administered an investment of approximately \$52,000,000 by the Office of Civilian Defense in protective equipment, of which about \$34,000,000 had been distributed on loan to about 2,900 communities. Operations under the Division's program included liquidation of two remaining warehouses, taking physical inventories of equipment at local levels, reconciling accounts, meeting needs of the Armed Services, and ascertaining surpluses. From July 1, 1944, to the end of February, 1945, with the exception of equipment required by the armed forces, the Office of Civilian Defense permitted voluntary reallocation of its protective property among communities from excess declared by the original receiving community. After February 28, 1945, the Office of Civilian Defense followed the policy of reporting as surplus to the appropriate disposal agency all property declared excess by the States and local communities. At the same time, however, the Office reserved the right of reporting as surplus, as the situation warranted, protective property wherever located and whether or not declared by the State or community as excess to its needs. Realizing that many States and communities were interested in retaining permanently the protective property in their custody, the Office of Civilian Defense arranged to report to the proper disposal agency the desire of a particular State or community to acquire such property. Under the Surplus Property Act, the State and local governments were given priority over all other purchasers of surplus property except for the requirements of Federal agencies. In the case of protective property, such as helmets, gasmasks and

armbands already in the possession of civilian defense volunteers, a bill was introduced in the House of Representatives in March, 1945, authorizing the retention of such property by the volunteers. As of June 30, 1945, the bill had not yet been enacted into law.

The Protection Services Division was responsible for providing advice to the States to aid them and local communities in maintaining volunteer protective organizations at an adequate level of proficiency. Through its advisory services to the States, the Division directed a greatly reduced program of passive protection against air raids, sabotage and other war hazards such as disasters, hurricanes, and floods. Early in April, 1945, as the collapse of Germany became more imminent, Lt. Gen. William N. Haskell (Ret.), Director of the Office of Civilian Defense, wrote to governors of all States outside the Western Service Command, informing them that the Office after V-E Day would confine its protection services to the West Coast, and suggesting that the States and local communities in other regions take over the supervision of auxiliary firemen and policemen as well as emergency medical and rescue services.

The Division of Federal-State Cooperation was responsible for facilitating cooperation between States and Federal agencies executing those programs and campaigns, essential to the successful prosecution of the war, which required community participation and the services of volunteers. The Division also acted as a clearing-house of information among States regarding organization and activities of local defense councils. The program and personnel of the Division of Federal-State Cooperation was sharply reduced in November and December 1944. During the six months of the agency's 1945 operations, the Division's program was conducted by no more than three employees who kept abreast of Federal programs requiring the use of civilian volunteers, such as salvage, rationing, recruiting women for the Armed Services, housing, nutrition, consumer interests, war savings, and similar programs, and served as a channel of information to the State and local defense councils.

The Industrial Protection Division was responsible for the coordination of the States War Inspection Service (SWIS) which was a voluntary inspection service carried on in each State under the supervision of the State Fire Marshal, or similar official, by qualified fire and accident prevention inspectors who served without expense to the government. At the time the Office of Civilian Defense was terminated, the SWIS was providing inspection services for approximately 11,000 plants and facilities. Following the termination of the agency, the question of continuing the program became the responsibility of the individual States.

During the closing weeks of 1944, renewed interest in the protection programs of the Office of Civilian Defense was stimulated by the joint War and Navy Departments' statement that robot bombing of the Eastern Coast was a possibility. Commanding Generals along the eastern seaboard were instructed by the War Department to coordinate their defense preparations with local civilian defense organizations. As winter wore into spring and the complete defeat of the Nazi armies became more imminent, it was decided that none of the programs need be continued as a Federal responsibility after V-E Day. Accordingly, on May 2, 1945, the President advised Congress that the budget estimate of the Office of Civilian Defense for the fiscal year 1946 was being withdrawn and the agency would be abolished on June 30, 1945.

Simultaneous with his communication to Congress, the President issued a statement which stressed the continued need for volunteer efforts in States and local communities. He expressed his appreciation to the volunteer members of the Citizens Defense Corps and the Civilian War Services and to the employees of the Office of Civilian Defense for their services in mobilizing the civilian population for the effective prosecution of the war. Although developments in the European war made possible the discontinuance of Federal supervision of civilian defense, the President stated "this change does not in any respect lessen the need for volunteer efforts in our States and communities." He then declared, "States and local governments are fully aware of their continuing responsibilities, and I am sure that we can depend upon their knowledge and the patriotism of the millions of volunteers to continue the war jobs in which the whole nation has had to be trained. Protection volunteers, such as auxiliary firemen and policemen, working with State and local governments have done a magnificent job through their defense councils in organizing to protect the nation against the threat of enemy action, sabotage and other war hazards. Civilian War Services volunteers have likewise rendered invaluable assistance."

"The millions of volunteer workers throughout the nation, giving freely of their time, have been basic to the strength of our democracy. I know they will willingly continue to serve."

On June 4, 1945, President Truman signed Executive Order No. 9562 terminating the U. S. Office of Civilian Defense effective June 30, 1945. Under the Executive order all protective property of the Office of Civilian Defense was transferred to the Department of Commerce. The Secretary of Commerce was to exercise all the functions incident to the storage, care, transportation, inspection, and disposition of such property. These functions were to be conducted by him in consonance with the Surplus Property Act of 1944 and the regulations of the Surplus Property Board. Except for the functions assigned to the Secretary of Commerce, the Executive order provided that the Secretary of Treasury through the Bureau of Accounts should wind up the affairs of the Office. The Executive order also provided that so much of the funds, records, property, and personnel as the Director of the Bureau of the Budget determined were to be transferred to either the Department of Commerce, or the Treasury for the purpose of carrying out their responsibilities under the Executive order.

At the close of business, June 30, 1945, Executive Order No. 9562 became effective. The Office of Civilian Defense as a Federal organization ceased to exist.

CIVIL SERVICE, U. S. The U. S. Civil Service Commission, as the central personnel agency of the Federal Government, has the responsibility of carrying out Federal personnel policies and procedures established under statutory or executive authority. It furnishes qualified civilian workers who have passed competitive examinations to fill positions in the Federal executive agencies.

Since the end of hostilities of World War II, in August, 1945, the Commission's major activities have been related to (1) the employment of veterans in Federal positions, (2) the restoration of veterans to their former Federal positions, if they desire restoration, and (3), an adjustment, by reductions in force, in the number of civilian employees on the Federal payroll to meet postwar needs.

The Civil Service Commission administers the Veterans' Preference Act of 1944, which gives preference in civil-service examinations to certain classes of persons because of military service. The act also restricts examinations, for certain positions, to persons entitled to preference so long as such persons are available to fill vacancies in the Federal service; and, for 5 years following the legal termination of the war, it empowers the President to designate other examinations in which competition may be limited to veterans. Persons employed in the Federal Government, if entitled to veteran preference, are granted certain retention rights.

Since Aug. 17, 1945, the Commission has accepted applications for positions in the Federal service only from persons with veteran preference who are entitled to have examinations reopened to them, and from Government employees released, or about to be released, in reductions in force. However, when the supply of returning veterans, and employees terminated because of reductions in force, is not sufficient to fill vacancies, the Commission has lifted the ban on receipt of applications from the general public.

More than a quarter of a million veteran placements—including placements of the wives of disabled veterans and the widows of veterans—were made in the Federal civil service during the year 1945. In the 3 years since Jan. 1, 1943, veteran placements have reached a total of approximately 550,000. By the end of 1945, 15,000 physically impaired veterans had been placed in Federal positions.

Approximately 680,000 persons left the Federal service to join the armed forces. Those restored to their former positions in accordance with the provisions of the Selective Training and Service Act since July 1, 1944, totaled more than 40,000 by the end of November, 1945.

The highest total civilian employment in the history of the Federal executive civil service occurred during World War II. There were fewer than 1,000,000 paid civilian workers on the Federal payroll in June 1939. Immediately thereafter, Federal employment steadily increased until the peak of employment was reached in June 1943 when paid civilian employment in the continental United States totaled more than 3,000,000 persons. Of this total, 2,720,000 were employed in Federal establishments outside Washington, D. C., and 280,000 were employed in Washington, D. C.

At the end of July, 1945, the total number of paid Federal employees stood at 2,900,000. Of this total, the War and Navy Departments employed 1,837,000 civilians—53,000 in their departmental headquarters, and 1,784,000 in their field establishments in war activities as follows:

Shipbuilding, repair and servicing at Navy Yards . .	327,000
Army Air Forces	384,000
Naval Air Operations	111,000
Naval Procurement, supply, and inspection . . .	86,000
Army Quartermaster	74,000
Army Ordnance	150,000
Naval Ordnance, Ammunition Depots, Torpedo Stations, etc.	87,000
Chemical Warfare Service	23,000
Army Signal and Transportation Corps	127,000
Army and Navy Hospitals and Medical services . .	19,000
Army Engineers	75,000
Army Service Commands	246,000
Marine Corps and Coast Guard activities	22,000
Miscellaneous other War and Naval activities . .	53,000

Emergency war agencies employed 160,000 war workers, making a total of 1,997,000 civilian workers engaged in war work. All other Federal agencies combined employed 903,000 persons, many of whom were also performing war work.

By the end of November, 1945, total Federal paid civilian employment in the continental United States had decreased to 2,450,000. Reductions in civilian employment have been made in accordance with the Commission's reduction-in-force regulations which have been set up under the authority of the Veterans' Preference Act of 1944, providing that, in a reduction in Federal civilian personnel, competing employees shall be released according to tenure of employment, military preference, length of service, and efficiency ratings. It is estimated that through the program adopted paid civilian employment in the Federal service will decline to approximately 2,000,000 persons by July 1, 1946.

A highlight in Federal personnel administration during the war was the Government's increased employment of physically impaired persons. The program for employing such persons was developed by the Medical Division of the Commission, which made a systematic analysis of the physical requirements of positions in the field service, particularly those in critical labor-shortage categories, with a view to making more positions available to the physically impaired. More than 5,100 kinds of jobs were studied. During the 3 years from October, 1942 to October, 1945, 70,000 physically impaired persons, about one-fifth of whom were veterans, were placed in Federal field establishments.

Another progressive step made during the year was the enactment of the Federal Employees Pay Act of 1945 by the 79th Congress. The Act increased the basic rates of pay of approximately 1,220,000 employees, and the rate of overtime compensation of nearly 1,480,000 employees, as of July 1, 1945. Federal employees who do satisfactory work are granted periodic salary advancements within the grades they occupy. The Pay Act reduced the waiting periods for these within-grade salary advancements from 18 months to 12 months for employees with salaries below \$4,700 per year, and from 30 months to 18 months for employees in salaries above this amount.

In addition to announcing and holding competitive civil-service examinations, and administering the Veterans' Preference Act of 1944, the United States Civil Service Commission conducts investigations relative to (1) the enforcement of civil-service law, (2) suitability of applicants (as regards character, trustworthiness, loyalty, etc.) for certain types of positions, and (3) the qualifications of applicants for top administrative positions; administers the Classification Act of 1923, as amended, which provides for the classification of positions according to duties and responsibilities; administers an efficiency-rating system; maintains service records and qualifications records of Federal employees; administers statutory provisions and civil-service regulations restricting political activity by Federal employees in positions subject to the Civil Service Act and by certain State and local employees participating in Federally financed activities; administers the Civil Service Retirement Act, the Canal Zone Retirement Act, and the Alaska Railroad Retirement Act. It also conducts a continuous study of personnel procedures, the purpose of which is to improve personnel management throughout the Federal service, and thus bring about the most effective use of the time and skills of Federal employees.

The Commission emphasizes the employment of veterans, and, from time to time, prepares, for recommendation to Congress, additional legislation which, it believes, will contribute to the

welfare of Federal employees and to greater economy and efficiency in personnel administration.

HARRY B. MITCHELL.

COAL. The United States maintained its position as the world's leading coal producer in 1945, but production of both bituminous and anthracite dropped from 1944 levels in the wake of labor difficulties. Bituminous coal output for the 1945 calendar year was 576,000,000 tons (1944: 620,000,000 tons); anthracite, 54,615,000 tons (1944: 64,445,000 tons).

Production got off to a bad start when cold weather slowed and in some cases halted shipments, forcing users to draw on already seriously depleted inventories. In particularly bad condition were coking coal stocks of the steel industry in the Pittsburgh and Birmingham districts, and in several cases mines were operated seven days a week in an attempt to make up the deficiency. This effort was nullified, however, when delays in negotiating a new wage agreement with the United Mine Workers union for the April 1, 1945-March 31, 1946 "coal year" caused widespread unauthorized walkouts early in April. These strikes, which persisted into early May, cost approximately 6,000,000 tons bituminous production, dragged down iron and steel production, and resulted in the government taking over 258 mines. The new wage agreement, agreed to April 11 and finally approved by the director of economic stabilization April 30, raised production costs an average of approximately 21 cents per ton, of which 16 cents was passed on to consumers in higher prices with Office of Price Administration approval. When the anthracite wage agreement came up for renewal May 1, a similar strike situation occurred, with the government taking over operation of about 363 mines in Pennsylvania May 4. The anthracite wage agreement, which was approved June 6, increased labor costs 60.7 cents per ton, and resulted in price increases of \$1 per ton on domestic sizes and 25 to 50 cents per ton on industrial sizes effective June 18. The mines were turned back to operators as soon as it was determined production would be continuous.

The most serious interruption to production came in October when the Union attempted to secure recognition as the bargaining agent for bituminous mine supervisory employees. By October 5, approximately 500 bituminous mines were strikebound and 200,000 miners idle. Steel production reacted almost immediately. Although the strike was called off without accomplishing its purpose, effective October 22, steel production recovered more slowly and some mills were holding down operations, in order to husband coal inventories, until the end of the year.

To alleviate suffering in Western Europe, where coal production had been slowed to a dribble by the ravages of war, the United States agreed to send 8,113,000 tons, about five days' production. The great Silesian coal-producing areas came under Russian jurisdiction in the occupation agreement.

Fitting the decreased American production to requirements was a tight squeeze despite the end of the war. Householders continued to be limited to 80 percent of normal usage of scarce eastern hard coals, and industrial coke users were limited to a 20-day inventory on October 15. Free domestic usage of soft coals was permitted however.

By-product coke production was 61,599,228 tons in 1945 (1944, revised: 67,064,795 tons). Beehive coke production dropped for the second

successive year, totalling 5,155,100 tons (1944, revised: 6,973,022 tons).

CHARLES T. POST.

COAST AND GEODETIC SURVEY. A branch of the U.S. Department of Commerce. In addition to surveying and charting the coasts, it compiles tide and current tables, aeronautical charts, magnetic information, seismological and gravitational and astronomical observations. All operations of the Survey were directed to meet war needs. Director: Leo Otis Colbert.

COAST GUARD, U. S. Demobilization of the Coast Guard's record wartime personnel of 173,165 officers and men, including 9,624 in the SPARS, was exceeding its scheduled minimum rate of approximately 800 commissioned, chief warrant and warrant officers and 13,000 enlisted persons per month by November, 1945. The program will extend over a period of 10 months from Sept. 1, 1945, and will reduce the military establishment to a complement of 3,500 commissioned officers, 1,400 chief warrant and warrant officers and 30,000 enlisted men. The Coast Guard has adopted the Navy formula for determining the method of discharge in order to insure maximum fairness in deciding the order of eligibility, for return to civilian life. All enlistments in the Reserve and Women's Reserve (SPARS) have been discontinued and future original enlistments will be in the regular Coast Guard and limited to 17 through 25 year olds.

All volunteer Temporary Reservists serving without pay, were scheduled for disenrollment as of Sept. 30, 1945, and all other classes of Temporary Reservists, including pilots, officers on Great Lakes vessels, and Civil Service employees, were disenrolled as of Nov. 30, 1945. Enrollment in the Temporary Reserve at one time totaled 52,333. Tentative plans were being made to retain a number of Reserve officers on active duty with their consent and the majority of these may be inducted into the Regular Coast Guard following the enactment of necessary legislation.

There were 1,677 Coast Guard craft in active service at the close of the 1945 fiscal year. The 262 Army vessels manned with 6,851 Coast Guardsmen at that time, and the 288 Navy transports, cargo ships, destroyer escorts, frigates, and landing craft on which 49,283 were stationed, were being rapidly decommissioned or turned back to the Army and Navy by the close of 1945. Nearly 3,000 reserve vessels which had been taken over or purchased during the war had been returned to their owners or disposed of.

The third anniversary of the SPARS on Nov. 23, 1945, found them in process of demobilization along with the other military Reserves of the Coast Guard. While the number of SPARS has not been large in comparison with the number of WACS and WAVES, which reached nearly 100,000 each, it has been large in proportion to the total personnel of the Coast Guard, one out of every sixteen enlisted persons being a SPAR. The Coast Guard was able to absorb such a large percentage of women into its organization because it selected women with usable skills, trained them quickly principally as Coast Guard yeomen and storekeepers, and assigned them so as to match the jobs to be done with the persons available. SPARS also attended certain Navy schools and were trained as sound motion picture technicians, link trainer operators, parachute riggers, chaplain's assistants and air control tower operators. Others attended Coast Guard schools and learned to be



BUSHER, THE HORSE OF THE YEAR

Three-year-old filly, daughter of War Admiral and Baby League, owned by Louis B. Mayer, won 10 of her 13 starts and rolled up winnings of \$273,735.

CONTEST WINNERS OF 1945

In the United States today there is a bewildering list of national contests and awards, from the beach parade producing the shapeliest and most talented "Miss America" to the tests selecting the hen laying the most eggs.

Professional baseball has its World Series which hundreds of thousands of fans follow avidly; college football players strive to make the mythical All American team. There are champion fencers, prize-fighters, swimmers, skaters, tennis players, trap-shooters, fly and bait casters, skiers, bobsledders—all through the 125 recognized American sports.

The Art museums award for painting and sculpture; writers may receive a Pulitzer prize or the sought-after Nobel award. Scientific and technical societies honor their workers for conspicuous achievement; the Metropolitan Opera picks young members by a competition; a fine bird dog has a chance to be crowned as winner of the National Field Trials or the Retriever tests, a race horse to be "the horse of the year," a trotter to win the Hambletonian crown. Beef cattle, milch cows, bench show dogs, chickens and cats, show ring horses—all complete. There are even annual prize-winning new flowers and garden vegetables.

Winners in Sports will be found in **SPORT RECORDS** and the articles on separate sports. A number of prize paintings are shown in the Art illustrations. The following pages show some picturesque figures of these contests.

Here is partial list of 1945 awards:

American Institute of Architects Awards; Exhibition Medal, established in 1921. To Bertram Goodhue and Lee Lawrie in ecclesiastical building, to Reginald Johnson in domestic building, to Charles Z. Klauder in institutional building, to Howard D. Smith in public build-

ing to George C. Nimmmons in industrial, to Charles D. Maginnis and Timothy Walsh in ecclesiastical, to Edward L. Tilton and Alfred Morton Githens in public building, to Sprout and Rolph of Toronto, Canada, in institutional, to A. Stewart Walker and Leon N. Gillette in domestic, and to Arthur Loomis Harmon in commercial.

Gold Medal, established in 1906. Sir Aston Webb, Charles Pollen McKim, George B. Post, Jean Louis Pascal, Victor Laloux, Henry Bacon, Sir Edwin Landseer Lutyens, Bertram Grosvenor Goodhue, Howard Van Doren Shaw, Milton Bennett Medary, Ragnar Ostberg, and Paul Philippe Cret.

Craftsmanship Medal, established in 1915. Henry C. Mercer in ceramics, Samuel Yellin in iron work, Frederick W. Goudy in typography, Charles Jay Connick in stained glass, V. F. Von Losberg in metal work, Frank J. Holmes in ceramics, William D. Gates in ceramics, the Cheney Brothers in textiles, John Kirchmayer in wood carving, Leon V. Solon in terra cotta and faience, Walter W. Kuntack in metals in glass, and illuminating fixtures; John J. Farley in concrete, and Joseph Dulles Allen in ceramics.

Fine Arts Medal, established in 1919. Paul Manship in sculpture, Arthur F. Mathews in painting; John Singer Sargent in painting, Dr. Leopold Stokowski in music, Lee Lawrie in sculpture, H. Siddons Mowbray (posthumously) in painting, Diego Rivera in painting, Adolph Alexander Weinman in sculpture, Frederick Law Olmsted in landscape architecture, James Henry Breasted in literature pertaining to the Fine Arts, Robert Edmond Jones in design for the theatre, and Carl Milles in sculpture.

HORTICULTURE

The American Rose Society selected as the All-American Rose of the year a new variety, originated by Francis Meiland at his gardens in Antibes, Southern France. Bud stock was taken, and in 1943 the required two-year tests started in fifteen official gardens. The final score of entry 43 R12 was the highest ever recorded since these tests started in 1939. Named "Peace," this champion rose is now being distributed—a beautiful large, hardy, free blooming, cream-yellow variety with a pink picotee edging to the new petals.

MOTION PICTURES

The National Board of Motion Pictures announced its choices of the year's best films, on the basis of artistic merit and importance.

Best film of the year: *The True Glory*

The ten best films in order of preference.

1. *The True Glory*
2. *The Lost Weekend*
3. *The Southerner*
4. *The Story of G.I. Joe*
5. *The Last Chance*
6. *Colonel Blimp**
7. *A Tree Grows in Brooklyn*
8. *The Fighting Lady*
9. *The Way Ahead*
10. *The Clock*

* The choice of *Colonel Blimp* is based on the merit of the uncut version of the film as it was originally released in the United States.

The Committee on Exceptional Photoplays selects:

The best performance of the year by an actor: Ray Milland in *The Lost Weekend*.

The best performance of the year by an actress: Joan Crawford in *Mildred Pierce*.

The best direction of the year: Jean Renoir for *The Southerner*.

Chosen by the Review Committees as the most popular films of the year:

1. *National Velvet*
2. *The Lost Weekend*
3. *The House on 92nd Street*
4. *Anchors Aweigh*
5. *The Fighting Lady*
6. *Keys of the Kingdom*
7. *The Story of G.I. Joe*
8. *A Tree Grows in Brooklyn*
9. *The True Glory*
10. *The Valley of Decision*

LITERATURE

Nobel Prize. Gabriela Mistral of Chile.

Pulitzer Prizes. John Hersey, novel, *A Bell for Adano*; Mary Coyle Chase, play, *Harvey*; Stephen Bonsal, history, *Unfinished Business*; Russell Blaine Nye, biography, *George Bancroft: Brahmin Rebel*; Karl Jay Shapiro, poetry, *V-Letter and Other Poems*; Harold V. (Hal) Boyle, A.P., for distinguished correspondence. James B. Reston, A.P. features; George W. Potter, *Providence, R.I., Journal Bulletin*, editorials; Mark S. Watson, *Baltimore Sunpapers*, telegraphic reporting; Jack McDowell, *San Francisco Call-Bulletin*, series on blood donors; Russell Blaine Nye; Joe Rosenthal photograph of flag-raising on Iwo Jima.

FIFTY OUTSTANDING BOOKS OF THE YEAR

The American Library Association selected its annual list of the year's outstanding books, most worthy of the attention of the present-day reader, though not necessarily of permanent value. The fifty titles were:

Adamic, *Nation of Nations*; Adams, A. Woolcott; Auden, *Collected Poetry*; Barzun, *Teacher in America*; Bowers, *The Young Jefferson, 1743-89*; Bromfield, *Pleasant Valley*; Caruso, *Enrico Caruso, His Life and Death*; Costain, *The Black Rose*; Dickinson, *Bolts of Melody*; Dobie, *A Tezan in England*; Du Bois, *Color and Democracy*;

Eskelund, *My Chinese Wife*; Harvard committee report, *General Education in a Free Society*; Hobart, *The Peacock Sheds His Tail*; James, *Cherokee Strip*; Langley, *A Lion Is in the Streets*; Lattimore, *Solution in Asia*; Lauterbach, *These Are the Russians*; Lewis, *Cave Timberlane*;

MacDonald, *The Egg and I*; Marshall, *The World, the Flesh and Father Smith*; Marshall, *General Marshall's Report*; Mauldin, *Up Front*; Mencken, *First Supplement, American Language*; Norris, *Fighting Liberal*; Papashvily, *Anything Can Happen*; Peattie, *Immortal Villages*; Pinckney, *Three O'Clock Dinner*; Rau,

Home to India; Robeson, *African Journey*; Russell, *History of Western Philosophy*; Santayana, *Middle Span*; Schlesinger, *Age of Jackson*; Shaw, *Elckshaw Boy*; Shallabarger, *Captain From Castile*; Simonov, *Days and Nights*; Smyth, *Atomic Energy for Military Purposes*; Snow, *The Pattern of Soviet Power*; Stegner, *One Nation*; Steinbeck, *Cannery Row*; Stewart, *Names on the Land*; Ullman, *The White Tower*; Wallace, *Sixty Million Jobs*; Welles, *An Intelligent American's Guide to the Peace*; Westcott, *Apartment in Athens*; Willison, *Saints and Strangers*; Wise, *Springfield Plan*; Woodward, *Tom Paine, America's Godfather, 1737-1809*; Wright, *Black Boy*; Yank, *Beat From Yank, the Army Weekly*.

SCIENCE

BIOLOGY. Stephen Hale Award in plant physiology to Dr. Ray F. Dawson of Princeton University. Professor N. G. Chlodny of the University of Kiev won the Charles Reid Barnes Life Membership in the American Society of Plant Physiologists. The Sir William Schlich forestry medal was given to Professor Henry S. Graves, emeritus dean of the Yale School of Forestry.

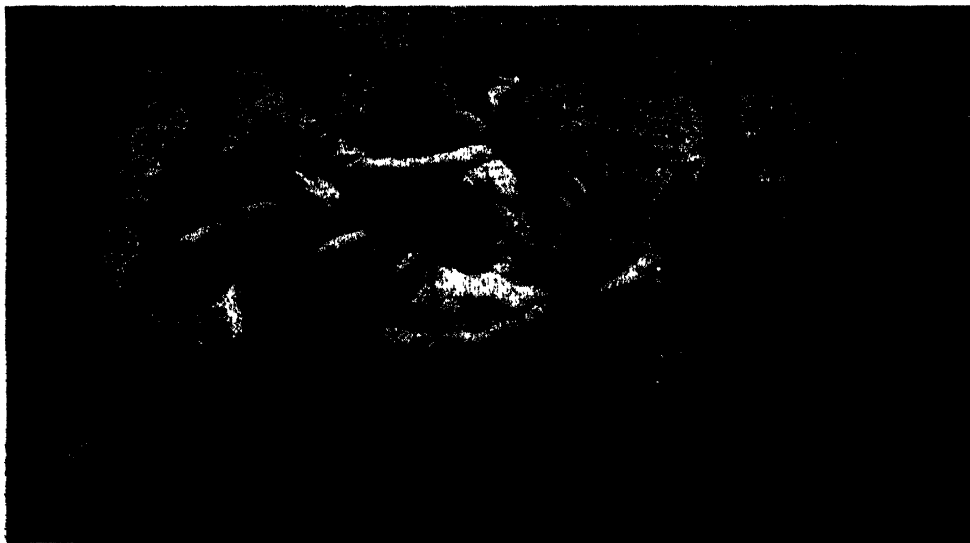
CHEMISTRY AND PHYSICS. Col. Bradley Dewey, former U. S. Rubber Director, won the annual Chemical Industry medal for work in colloid chemistry. Dr. William Mansfield Clark, Johns Hopkins University, for work on the acid or alkaline state of milk, the Borden Company Prize of \$1,000. Dr. Joseph S. Fruton, Rockefeller Institute for Medical Research, the \$1,000 Eli Lilly & Company prize in biological chemistry for studies of the amino acids. Dr. Elmer K. Bolton, chemical director of the Du Pont Company, won the Perkin medal of the American section of the Society of Chemical Industry. Dr. Arthur C. Cope, Columbia University, the American Chemical Society Award of \$1,000 in pure chemistry for researches on vinyl and allyl chemical types in plastics and drugs. Dr. William David Coolidge, General Electric Company, and Dr. Peter Kapitza, U.S.S.R. Academy of Sciences, Franklin medals by Franklin Institute. Dr. Robert Clark Jones, the Adolph Lamb medal for mathematical calculation for optics which made possible an optical gunsight for bazookas.

ENGINEERING AND TECHNOLOGY. The Edison medal to Dr. Vannevar Bush, president of the Carnegie Institution of Washington, for contributions in electrical engineering.

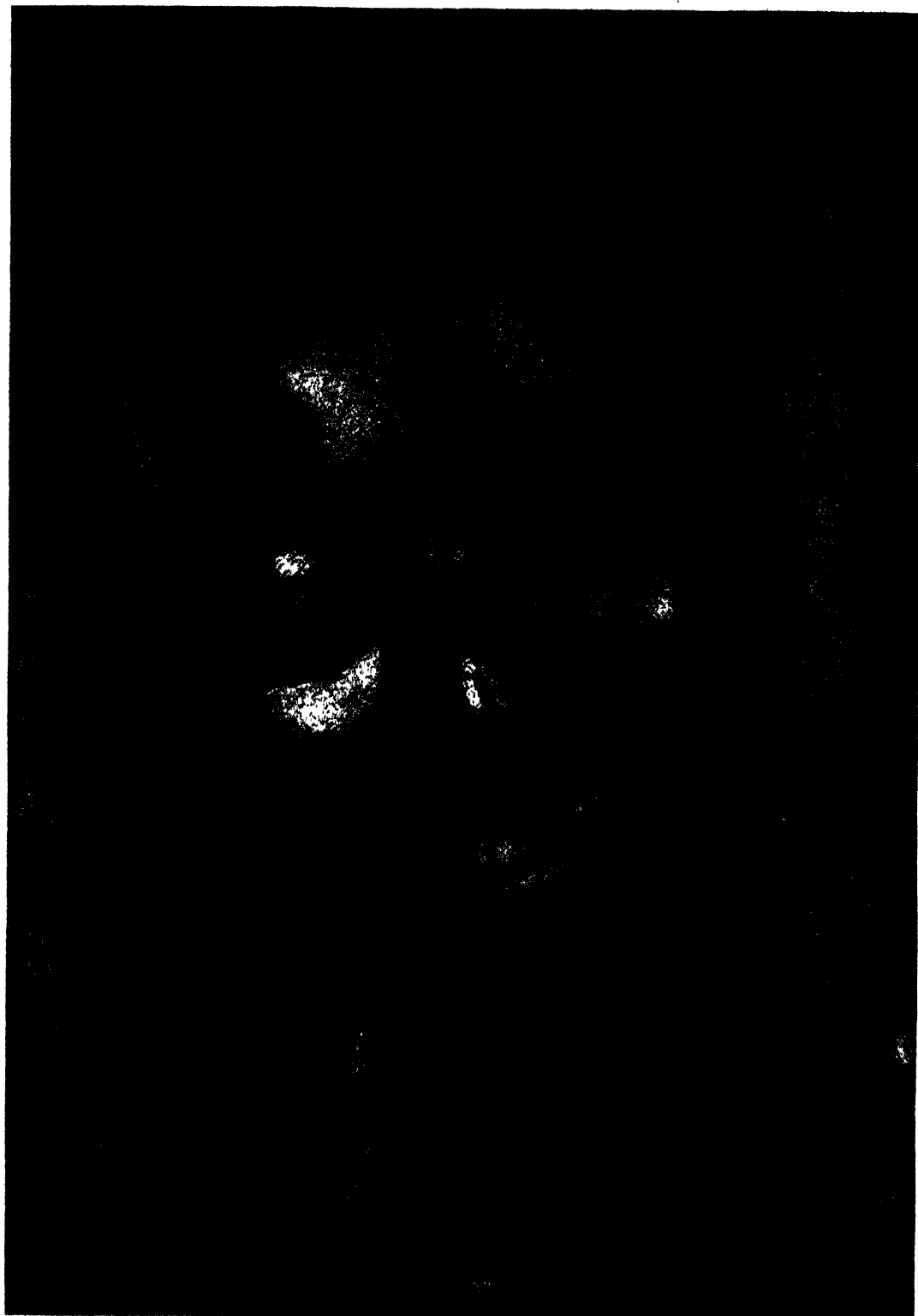
ENGINEERING AND TECHNOLOGY. The Faraday medal of the British Institute of Electrical Engineers, to Dr. Irving Langmuir of the General Electric Research laboratory.

MEDICINE. The gold medal of the American Academy of Orthopedic Surgeons to Col. John L. Gallagher for his development of compression dressings for wounds, burns and frostbite. Discovery that certain hormones and synthetic chemicals may become weapons for fighting tumors of the uterus in women during the child-bearing period won the second \$2,000 Charles L. Mayer Award for Dr. Alexander Lipschutz of Chile.

PSYCHOLOGY AND PSYCHIATRY. Col. William C. Menninger, chief of the psychiatric division of the Army's Surgeon General's office, from the National Committee for Mental Hygiene, the new \$1,000 Lasker award for his outstanding contribution to the mental health of service men and women.



TOSSING THE WINNING COXSWAIN OVERBOARD, AFTER THE LIFEBOAT RACE (U.S.M.S.)



GABRIELLE MISTRAL

Chilean winner of the 1945 Nobel Prize for Literature. Novelist, poet, sociologist, biographer and political figure, her first book appeared in 1922, and she is the first woman of Latin America to be so honored internationally. (*Jean Manzon, Pix*)



THE AMAZING TROTTER TITAN HANOVER, 1:58, THREE-YEAR-OLD CHAMPION

trained and driven by Harry Parnall, owned by C. Roland Harriman and Elbridge T. Gerry. The daughter of War Admiral. Won \$57,431.55 in 1944-45. Outclassed competitors so that public was not allowed to bet. (Bob Kenefick)

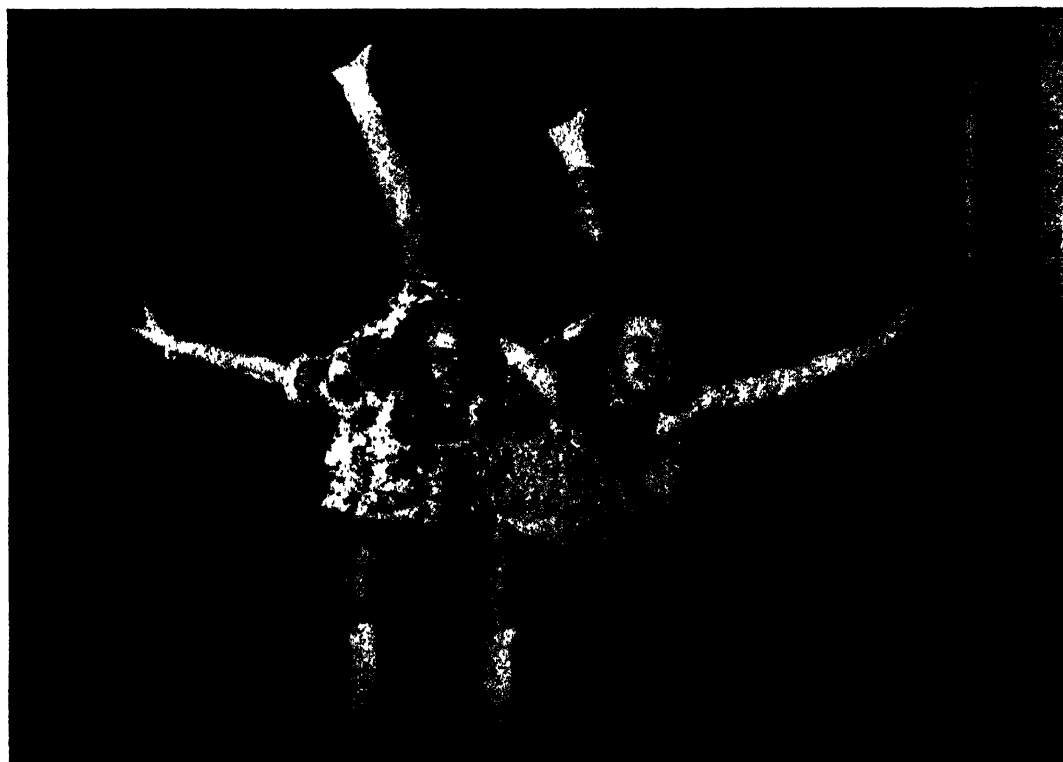


SEP PALIN, GRAND OLD MAN OF HARNESS RACING

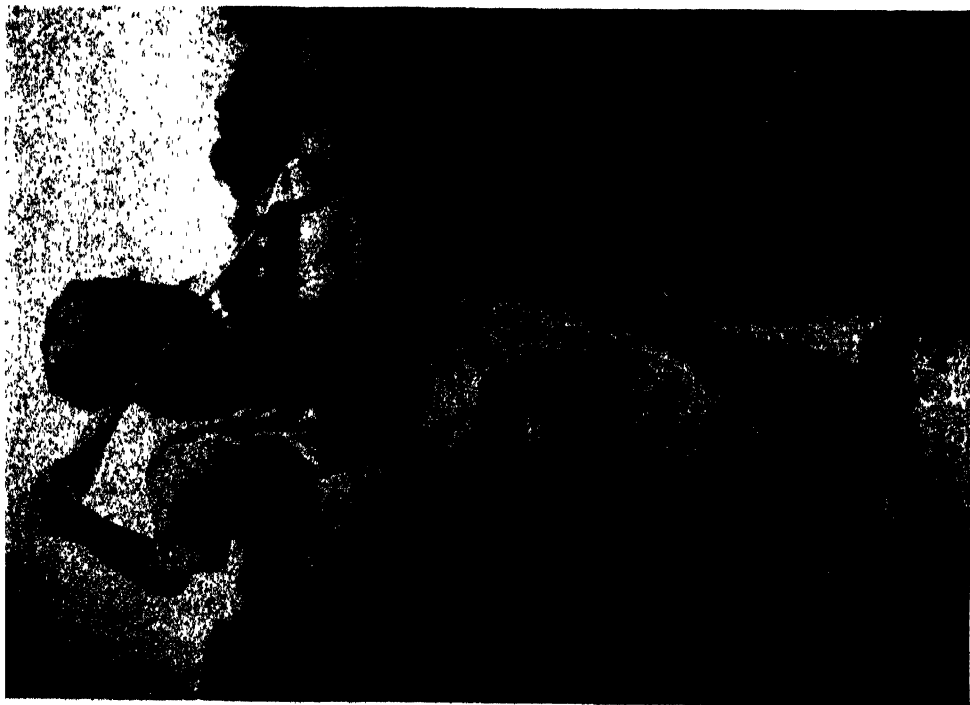
Broke world trotting record with Grayhound's 1:55 $\frac{1}{4}$. Topped Grand Circuit winners, led all drivers with winnings of \$77,431.07.



MARIA CERRA (RIGHT) WOMEN'S INTERCOLLEGIATE FENCING CHAMPION
in a bout with Berly Petchesky, Captain of NYU team. (Acme)

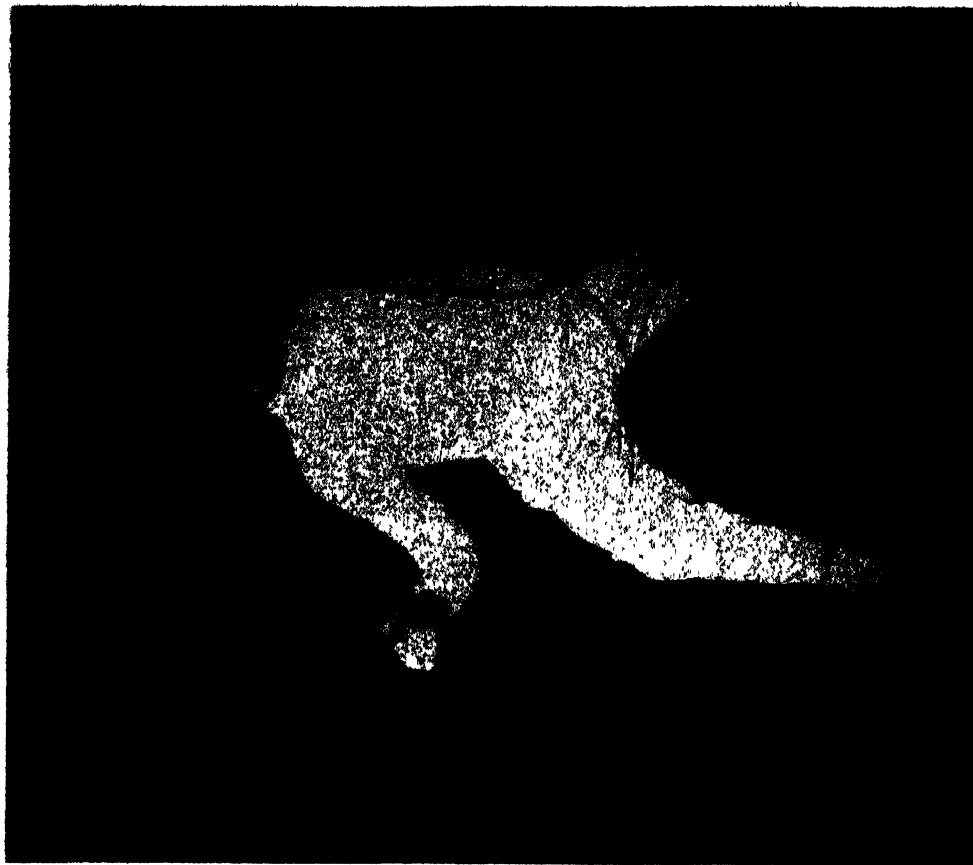


BARBARA ANN SCOTT (RIGHT), NORTH AMERICAN CHAMPION, AND GRETCHEN MERRILL, RUNNER-UP
16 year old Barbara, Canadian Ladies Senior Champion won the National figure skating



BYRON NELSON, GOLF'S WONDER MAN

Leading money winner of the year, who won every tournament but two of those he entered in the winter pro circuit. (Press Assn. Inc.)



NORMAN C. ARMITAGE, NATIONAL SABRE WINNER

Mr. Armitage, of the Fencers Club, successfully defended his title. (Acme)



BLACK MAGIC OF AUDLON, NATIONAL CHAMPION RETRIEVER

This stylish Black Labrador won the Fifth Annual Trials at Shelter Island Nov. 30 and Dec. 1-2. (Percy T. Jones)



ANN CURTIS, SENSATIONAL SWIMMER AT ANY DISTANCE

At 19, Miss Curtis holds more World and American swimming records than any other woman. (Wide World)



JAMES RAFFERTY, RUNNER OF THE YEAR, WINNING THE 1 MILE CHAMPIONSHIP

The Track Writers Association unanimously voted this former Fordham star the indoor season's outstanding athlete. He won 7 1-mile races, and was the fourth man ever to sweep the board in the Eastern indoor season (*Wide World*)



WILLIE PEP'S LEFT FINDS ITS MARK

Pep, world featherweight champion, was perhaps the most consistent performer among the prizefighters during the unsettled war years. (*Acme*)

cooks and bakers, radiomen, pharmacist's mates, radio technicians and drivers of motor vehicles who knew how to maintain their own cars. They were assigned to all districts except the Tenth (Porto Rico), and as demobilization began there were some 200 detailed each to the Honolulu and Ketchikan districts.

Following the surrender of Japan in August, port security responsibilities were confined to the supervision of the proper handling, movement, loading and unloading of explosives and other dangerous cargoes, and to fire-protection measures incident thereto. All other port security functions were to be eliminated as rapidly as possible except in the Fourteenth Naval District (Hawaii). The regulations for the security of vessels in ports and those for the protection of waterfront facilities were in process of being rescinded. All Captain of the Port personnel not required for explosive-loading activities and fire protection connected with them, were available for discharge or other utilization, and all surplus fireboats, patrol boats, and other port security facilities and equipment were made available for appropriate disposition. These port security forces had made an enviable record during the war in guarding America's ports. Over 4,000 vessels had loaded explosives under their supervision without a single major casualty.

During the war, lighted aids to navigation had been blacked out, dimmed or shielded and lightships removed to safety. Radio-beacons were silenced to prevent them from being of assistance to the enemy. As early as December, 1943, after the peak of the danger had passed, certain aids to navigation, particularly those in inland waters, were relighted. Even coastal and offshore lights were restored about this time in certain areas of the Pacific Coast where 632 lights and 26 lighted buoys had been extinguished. During the war 808 lights on the Atlantic and Gulf coasts also had been temporarily extinguished and 264 other lighted aids, mostly buoys, were temporarily replaced by unlighted aids. By the end of 1945 full authority for the restoration of peacetime operating conditions had been granted and the district Coast Guard Officers had reestablished practically all temporarily extinguished aids to navigation. A total of 36,213 aids to navigation were being maintained at the end of the fiscal year.

Having installed and operated a large network of Loran stations during the war, and also having had much experience with Radar, the Coast Guard now hopes to operate much of this equipment to facilitate the peacetime operations of the merchant marine. Loran, a system whereby a vessel may determine its position, even when 800 miles from the transmitting station in daytime, and 1,400 miles at night, utilizes pulse transmission, which permits measurement of the time of travel of the signals. An infinite number of lines of position are thus laced over the earth's surface by radio. Two shore stations operating as a Loran "Pair" lay down a set of these lines, and a Loran receiver indicator aboard ship, connected to an ordinary antenna, enables the navigator to select the pair of signals appropriate to his area. The difference in time of travel of the radio waves from two ground stations is measured and a line of position deduced from this time difference. Thus by making two or more readings on two or more pairs of signals, the navigator may obtain the ship's position. Radar, by providing the mariner with a "picture" of his surroundings on a screen, showing objects which may otherwise be invisible because of darkness or fog, offers many ad-

vantages. It will provide a means of detecting the presence of land, other vessels, or any obstruction from which its waves may be reflected. In navigating channels and harbors (restricted waters) the device will "pick up" buoys and similar aids to navigation. Rescue work will be speeded up by showing the position of the vessel in distress, eliminating much search time. In July, 1945, 64 fixed and 17 mobile Loran Stations were being operated by the Coast Guard. At the same time 45 RACON (Radar BeaCON) were under its operational control. These had been installed on the Atlantic and Pacific Coasts, and in Hawaii and Alaska, and give the distance and bearing within a maximum range of 120 miles of an airplane from such beacon, enabling any craft to navigate in all weather conditions, if fitted with the proper interrogation equipment. Considerable development work is being conducted by the Coast Guard to adapt or provide the radar beacon system for marine navigation. This development also includes all shore based radar aids to navigation such as radar reflectors. The rapidity with which merchant vessels install the necessary equipment will largely determine the more extensive use of these devices.

Under marine inspection laws the Coast Guard had certificated 1,627 new vessels aggregating over 9,000,000 gross tons during the fiscal year 1945. In addition 9,720 vessels had undergone annual inspections by Coast Guard marine inspectors during the same period. Merchant Marine Hearing Units operated in all important U. S. ports during 1945 and others located in Europe, Suez, Ceylon, the South and Southwest Pacific and the Canal Zone, investigated marine casualties and conducted examinations of personnel, issuing officers' licenses and seamen certificates.

The nine Coast Guard air stations along the U. S. coasts continued under the operational control of the various Sea Frontiers and served as task units in the conduct of Air-Sea Rescue. Their 165 planes rendered assistance in 686 plane crashes and saved 786 lives during the fiscal year 1945. Included among these were 11 Canadian airmen rescued by helicopter in Labrador. Training of helicopter pilots and maintenance crews continued.

In the last stages of the war in the Pacific, Coast Guard manning attack transports, LSTs, LCI(L)s and other vessels participated early in 1945, in important assault landings at Iwo Jima, Zamboanga, the Ryukyu Islands and Okinawa. Others landed on the shores of Japan and were present at the final surrender of Japan's armed forces in Tokyo in August.

RUSSELL R. WAESCHE

COLOMBIA. A republic of South America. Area: 439,825 square miles. Population: 9,620,800 (1943). Capital: Bogotá.

The Andes, intersected by high plateaus and deep river valleys, form the western third of the country; the remainder consists of plains watered by the Orinoco and Amazon Rivers. The climate varies with the altitude, low areas having tropical heat, plateaus temperate climate, and the high mountain regions cold to frigid temperatures.

Government. Under the Constitution of 1886, Colombia is a centralized republic of 14 Departments, 4 Intendencias, and 6 Comisarias. It has a bi-cameral Congress composed of a Senate of 63 members and a Chamber of Deputies of 131 members. The Congress holds two regular sessions a year; the first opens on Feb. 1 for 90 days and the second begins on July 20 and meets for

120 days. The President is elected for a 4-year term, and is aided by a Cabinet of 10 ministers. Alfonso López Pumarejo was elected President on Aug. 7, 1942 for his second term (he previously served from 1934-38). In August, 1945, President López resigned, and Dr. Alberto Lleras Camargo, First Presidential Designate, became President to complete the term ending Aug. 7, 1946.

The People. The majority of the population of Colombia is mestizo; the rest are persons of European descent (15 percent); Indians (10 percent); and Negroes (5 percent). The group of Negroes and Negro mixtures has been estimated at about 30 percent. Most of the people live in the Magdalena River valley in the mountain belt; population density is low in the coastal regions, and very low in the lowlands of the Orinoco and Amazon. Colombia's largest cities are: Bogotá, 395,000; Medellín, 198,000; and Barranquilla, 183,000.

The official language is Spanish. The predominant religion is Roman Catholic.

According to the census of 1938, 43.3 percent of the population over 10 years of age is literate. In 1941 there were 19,901 primary schools with a total enrollment of 685,317; 58,980 students were enrolled in 776 secondary schools; and 3,713 students were enrolled in 8 universities.

National Economy. Colombia is chiefly an agricultural country. The most important crop is coffee, of which Colombia is the second largest producer in the world. Other leading crops are: corn, sugar, bananas, wheat, rice, and potatoes. The pastoral industry is also of considerable significance. Coffee production for the 1944-45 season reached a total of 727,518,000 pounds. Estimated annual production of corn is 650,000 tons, and of potatoes, 418,000 tons. Estimated production of wheat in 1944 was 100,000 metric tons; of rice, 121,000 tons of paddy rice, or 65,045 tons of polished rice. Sugar production in 1944 totaled about 88,000 short tons.

Colombia has extensive mineral resources. Petroleum provides the second most valuable of the country's exports. Total crude oil production during 1944 amounted to 22,647,476 barrels, compared with 13,261,065 barrels in 1943. Colombia also produces gold and platinum; production in 1944 amounted to 553,531 troy ounces of gold, and 34,259 troy ounces of platinum. Copper, iron, and emeralds are also important mineral products.

There is little heavy industry, but Colombia manufactures a variety of products. The year 1944 was notable for continued commercial and industrial development. Principal commodities manufactured include: textiles, leather, beverages, cigarettes, glass, perfumery, cement, brick, pharmaceuticals, and clothing.

Foreign Trade. In recent years Colombia's foreign trade with countries in the Eastern Hemisphere has declined, while trade with western hemisphere nations has greatly increased. Total exports for 1943 were valued at 218,525,000, pesos. Principal products exported, by value, were: coffee, crude petroleum, dyed cotton cloth, cattle hides, cattle, and platinum. The U.S. received 85.6 percent of the total exports to western hemisphere countries. During the 1944-45 coffee quota year a total of 5,185,517 sacks of 60 kilograms each were exported from Colombia, of which 4,696,255 sacks went to the U.S., and 71,911 sacks to Europe. The value of coffee exported in 1944-45 exceeded 177,000,000 pesos. Exports of petroleum in 1944 were valued at 37,317,000 pesos.

In 1943 total imports were valued at 146,692,000 pesos; the U.S. was the principal source of supply. In that year leading imports by value were: raw cotton and waste, rubber tires and tubes, dyed wool yarn, cotton thread, newsprint, and wrapping paper.

Events, 1945. President Alfonso López was still under heavy fire as the year opened. In his New Year's message, he asked that a committee of the Chamber of Deputies investigate his Administration and his personal activities, "because only when its unmistakable judgment has been pronounced will the nation be relieved of impediments placed in its way." He declared that the opposition Conservative Party regarded him as an obstacle to harmony, referred to his recent offer to resign, and asserted that he was prepared to do anything necessary to subordinate partisan politics to the national interest. He added that the state of emergency which had been decreed during the abortive Pasto insurrection in July, 1944, would be lifted as soon as Congress had reviewed the Administration's acts during the emergency.

A special session of Congress opened on Jan. 22 to consider the emergency acts, constitutional reform, reorganization of the Army, and pending labor, petroleum and agrarian legislation. This session would mark the termination of the Pasto incident, López told the legislators. He warned that the country must face serious war and post-war problems and that it was possible that revolutionary activity was still afoot, and he urged political parties to stop quarreling over academic issues and to concentrate on vital problems. In conclusion, López praised the patriotic attitude of opposition congressmen, and expressed the opinion that partisan barriers between Liberals and Conservatives were tending to disappear, citing Conservative support of constitutional reform and other Administration-sponsored measures.

Presidential politics became an active issue on Jan. 27 when a welcoming demonstration, sponsored by the Liberal Party, greeted Gabriel Turbay, former Ambassador to the United States and presidential candidate, on his return to Bogotá. The National Directorate of the Liberal Party was reorganized on Feb. 3 to include former President Eduardo Santos, Turbay, Foreign Minister Darío Echandía, and Julio Roberto Salazar Ferro. Echandía's resignation to head the Directorate forced a Cabinet shift: Interior Minister Alberto Lleras Camargo became Foreign Minister and Education Minister Antonio Rocha was named Minister of the Interior.

The special session of Congress adjourned on Feb. 16 after having passed most of the Administration-sponsored measures submitted to it; but the resignation of Mines and Petroleum Minister Nestor Pineda was attributed to the Senate's failure to act favorably on proposed amendments to petroleum legislation. Another special session was called for May 2 to pass on measures taken during the state of seige, imposed July 10, 1944, which was officially lifted by presidential decree on Feb. 21.

The Government announced on Mar. 11 that it had discovered several hundred bombs and hand grenades in sacks hidden in the Bogotá cathedral. More than a score of persons were arrested, and Administration forces charged the Conservatives with plotting against the López regime. Archbishop Ismael Perdomo issued a formal statement in which he expressed the Church's disapproval of any subversive movement, and called the plot criminal and sacrilegious. The Govern-

ment announced that it regarded the affair "as an event of the gravest character, with ramifications in various parts of the country, and that it has taken precautions to assure the maintenance of public order." Some of those arrested were said to have been involved in the 1944 Pasto uprising. The Administration received messages of support from the National Manufacturers Association, the Bogotá Chamber of Commerce, and many labor unions. It stated that the Army was not involved in the plot; only five army officers were among those arrested, and they were later declared innocent and released. This incident occurred on the eve of elections in which the entire Chamber of Deputies and all 14 departmental assemblies were renewed. The significance of the poll lay in the fact that the Liberals elected played a major role in the party convention in July, at which the Administration's 1946 presidential candidate was selected. Eight hundred thousand voters—called a light turnout—went to the polls on Mar. 18. Official returns gave the Liberals 80 seats in the Chamber of Deputies, the Conservatives 46, and the Socialist Democrats (Communists) 5. Election trends were: a heavy increase in the Communist vote, and Liberal gains in the rural districts. Followers of Turbay claimed an intra-party victory. In the wake of the election, the Administration urged all persons who could do so to evacuate Bogotá, where the water shortage had become increasingly serious, in spite of the season's first rainfall on Mar. 21. Two days later all Bogotá schools were ordered closed temporarily as medical authorities warned of epidemics.

López attempted to set up the republic's first bipartisan Cabinet since 1934 on Mar. 30, when he appointed three Conservative leaders to ministerial posts: Roberto Urdaneta Arbaláez, member of the delegation to the Mexico City conference, was named Finance Minister; former Attorney General Rafael Escallón, Minister of Education; and Senator Manuel Barrera Parra, described as an "extremist" follower of Conservative Party chief Laureano Gómez, Minister of Mines and Petroleum. The Administration declared that this step was taken in conformity with the principles outlined in López's November 1944 message to Congress, in which he called for national unity to meet the problems of the transition period from war to peace. Urdaneta Arbaláez and Barrera Parra declined the appointments, however. One local Liberal leader declared that: "The appointment of the three Conservative Ministers disturbs the Liberal party without pleasing the Conservative party." The whole effort collapsed on Apr. 8, when Escallón reversed his earlier acceptance and declined appointment as Education Minister, declaring that his inclusion in a Liberal Cabinet would impede rather than aid national unity. The posts were filled by Liberal appointees.

The special session of Congress was postponed from May 2 to June 4 and later to June 25 to "study the laws necessary under agreements arising from the Mexico City and San Francisco international meetings."

Another terrorist plot, to which the authorities attached little political significance, was broken up on May 31, when six men were arrested and 20 pistols and a dynamite cache were confiscated. The Army and police were restricted to barracks and private telephone communication throughout the republic was suspended, but the country remained calm.

On the following day there was a mutiny in the Bogotá penitentiary, led by General Eduardo Bonitto and other army officers jailed as a result of the

1944 Pasto rebellion. They temporarily seized control of the prison and demanded the release of political prisoners, but the Government quickly regained control. Once again capital and labor organizations pledged support to the Government, and the Colombian Labor Federation called for action "to end, once and for all, these attempts by pro-Fascist forces." All army generals and officers of the Bogotá garrison called on the President on June 4 to assure him of their loyalty.

There were student demonstrations in Bogotá university during the second week in June, and on June 12 the Government, announcing the existence of a subversive movement, decreed a state of emergency in the capital. The decree provided for censorship of the press and communications, and prohibited public meetings. In a letter to the Attorney General, President López charged on June 13 that Conservative leader Gómez knew the names of industrialists, many of whom had pledged loyalty to the Administration after discovery of the last plot, who were backing the current subversive movement. Gómez refused to divulge his information to the authorities, López added. The National Manufacturers Association called the charges "too ridiculous to need denial."

The special session of Congress convened on June 25 and López told it that he was prepared to resign if this would "redeem the country from the unrest in which it has lived in recent months." He confessed that he was puzzled by the recent subversive outbreaks and declared that a new "reactionary campaign," marked by the clergy's re-entry into politics, had been launched, and that many Conservatives were defending convicted seditionists.

Former Foreign Minister Darío Echandía and Aníbal Badel, First and Second Presidential Designates, respectively, resigned on July 7.

Thousands participated in a pro-Administration Bogotá demonstration on July 10, anniversary of the abortive Pasto rebellion. Labor, banking, and the Liberal and Socialist Democratic (Communist) Parties vigorously rejected López's suggestion that he might retire, and the President assured them that the Government would maintain order at all costs; he called for national cooperation to adjust to postwar economic conditions. On July 17 the Senate rejected López's proffered resignation and passed a resolution promising the Administration "steadfast cooperation with measures tending to maintain calm in the country and strengthen its democratic institutions." But on July 19 López told the Senate that he was determined to resign. "What moves me to believe that my separation from the Government is indispensable," the President explained, "is the fact of not having attained my aims, although they have the copious support of national majorities."

In the midst of the presidential crisis, the regular session of Congress opened on July 20, the state of emergency in Bogotá was lifted on the same day, and the national convention of the Liberal Party began on July 22.

Followers of Darío Echandía withdrew from the convention when they failed to block a move to replace the plural party directorate with a single chief, and on July 25 Gabriel Turbay won the party's presidential nomination by a vote of 154 to 3. Echandía partisans announced that they would seek invalidation of the nomination. And one-time Labor Minister Jorge Eliécer Gaitán declared that he also was still in the race.

On July 27 Foreign Minister Alberto Lleras Camargo was elected First Presidential Designate by

122 congressional votes against 64 cast for Luis López de Mesa, thereby putting him in line to succeed López.

The President sent his formal resignation to the Senate on July 31, expressing the hope that his withdrawal from office would produce "fundamental change in political conditions to guarantee order, to fortify the civil administration and to create an atmosphere of tranquility for the great work of national collaboration in all public and private activities." The Senate on Aug. 2 accepted the resignation unanimously, and on Aug. 7 Lleras Camargo was inaugurated for the remainder of López's term, ending on Aug. 7, 1946. Lleras Camargo's inaugural speech confirmed the expectation that his interim Administration would devote itself to calming the country's troubled political waters. He would give all his time, the President said, to the study of vital problems and not to his personal defense, because he did not recognize "enemies within the fatherland." "I will cooperate closely with Congress during my term of office," he announced.

During the rest of the year, Colombia was chiefly preoccupied with party politics. The Liberal Party became more and more divided. Echandia withdrew from the presidential race on August 4 in order to avoid deepening the split in the party, which he said had been aggravated by the "hasty" nomination of Turbay. But Eliécer Gaitán remained an active opponent of Turbay, and his strength was said to be growing as time passed, particularly among the workers. The light Liberal vote cast in municipal elections on Oct. 7 was called favorable to him, for he had asked his followers not to participate. Meanwhile the Conservatives postponed a final decision on their part in the 1946 election, apparently waiting to capitalize on Liberal disension. When a provincial Conservative newspaper proposed a candidate, leader Laureano Gómez characterized it as carrying on "intelligence with the enemy."

Laureano Gómez made another characteristic gesture in November, when he resigned from the Senate committee which advises the Foreign Ministry because its Liberal members were in favor of asking Ecuador to extradite Capt. José Gregorio Quintero. Quintero was the officer who shot and killed Gen. Julio Guerin when the general refused to take part in the Pasto revolt. Quintero was arrested but escaped from jail and fled to Ecuador. The Government maintained that the captain was a common criminal and hence subject to extradition. Gómez said he was a political refugee because he had been tried by a court martial.

The country faced a labor crisis late in the year when 12,000 boatmen on the Magdalena River went on strike. The river is a life-line of Colombia, since the river boats carry most of the goods which move between the coast and the interior. For this reason Colombians have always feared such a strike, which the boatmen's Communist-dominated union has often used as a threat. The demands of the strikers seemed unreasonable and apparently political in nature. The firmness with which the young interim President met the challenge and ended the strike greatly increased his political stature.

HARRY B. MURKLAND.

COMBINED CHIEFS OF STAFF—United States and Great Britain. Establishment of the Combined Chiefs of Staff was announced by the War Department on Feb. 6, 1942. Under the direction of the heads of the United Nations, the Combined Chiefs of Staff collaborated in the formulation and execution of policies and plans concerning (a) the strategic

conduct of the war; (b) the broad program of war requirements, based on approved strategic policy; (c) the allocation of munition resources, based on strategic needs and the availability of means of transportation; (d) the requirements for overseas transportation for the fighting services of the United Nations, based on approved strategic priority.

U.S. Members: Adm. W. D. Leahy, Chief of Staff to the Commander in Chief of the Army and Navy; Gen. Dwight D. Eisenhower, Chief of Staff, U.S. Army; Adm. C. W. Nimitz, Commander in Chief, U.S. Fleet, and Chief of Naval Operations; Gen. H. H. Arnold, Commanding General, Army Air Forces.

British Members: Field Marshal Sir Henry Maitland Wilson, Head of British Joint Staff Mission in Washington; Adm. Sir James Somerville; Lt. Gen. Sir G. N. Maccready; Air Marshal Douglas Colyer.

COMBINED FOOD BOARD—United States, United Kingdom, and Canada. A Board created on June 9, 1942, by the President of the United States and the Prime Minister of Great Britain, to obtain a planned and expeditious utilization of the food resources of the United Nations in order to coordinate further the prosecution of the war. In October, 1943, the Canadian Prime Minister accepted membership in behalf of Canada. U.S. Member: Clinton P. Anderson, Secretary of Agriculture.

COMBINED PRODUCTION AND RESOURCES BOARD—United States, Great Britain, and Canada. A Board created by the President of the United States and the Prime Minister of Great Britain on June 9, 1942, for the most effective use of the combined resources of the United States and the United Kingdom for the prosecution of the war. It was expanded on Nov. 10, 1942, to include a Canadian member. The function of the Board is to determine the availability and sources of supply for finished products (other than raw materials and foodstuffs) required in liberated areas and to coordinate production and allocation.

Members: United States, J. A. Krug; Great Britain, Stafford Cripps; Canada, C. D. Howe.

COMBINED RAW MATERIALS BOARD—United States and Great Britain. A Board created Jan. 26, 1942, by President Roosevelt and former Prime Minister Churchill to mobilize the raw material resources available to the United States and United Kingdom for the most effective combined use against the enemy. On Jan. 20, 1945, the charter of the Board was reaffirmed and continued for the duration of the war. The Board is composed of the following: United States Member, William L. Batt, and Executive Secretary, R. B. Whiting; United Kingdom Member, Sir Henry Self, and Executive Secretary, H. O. Hooper.

The activities of the Board included over-all review of the supply and requirements position of the United Nations for the major critical and essential raw materials, allocation of supplies of scarce raw materials among the United Nations when necessary, recommendations aimed at expanding supplies and conserving the use of raw materials in short supply, coordinating the purchasing activities of the United States and Great Britain in foreign raw material markets, and the adjustment of the day-to-day raw materials problems which have been referred to or initiated by the Board.

COMBINED SHIPPING ADJUSTMENT BOARD—United States and Great Britain. A Board created in 1942 to adjust and harmonize the work of the British Min-

istry of War Transport and the War Shipping Administration.

COMMERCE, Department of. A Department of the U.S. Government, created in 1903 as the Department of Commerce and Labor. The activities of the Department include population, agricultural and other censuses; collection, analysis, and dissemination of commercial statistics; promotion of foreign and domestic commerce; coastal and geodetic surveys; establishment of commodity weights, measures, and standards; supervision of the issuance of patents and the registration of trade-marks; the establishment and maintenance of aids to air navigation, the certification of airmen, the inspection and registration of aircraft, and the enforcement of rules and regulations issued pursuant to the Civil Aeronautics Act of 1938; supervision of the issuance of weather forecasts and warnings for the benefit of agriculture, commerce, and navigation including weather service for aviation, and the publication of climatic statistics; development of inland waterway transportation, and supervision of the operation of government-owned barge lines, and numerous other functions concerning these activities and related subjects.

The Department of Commerce as at present constituted, with the Office of the Secretary, includes:

Bureau of the Census
Civil Aeronautics Administration
Coast and Geodetic Survey
Bureau of Foreign and Domestic Commerce
Inland Waterways Corporation
Patent Office
National Bureau of Standards
Weather Bureau

Secretary in 1945: Henry A. Wallace; Under Secretary, Wayne C. Taylor.

COMMODITY CREDIT CORPORATION (CCC). An agency under the War Food Administration of the U.S. Department of Agriculture, established as an independent agency in 1933, transferred to the War Food Administration, Apr. 19, 1943, and later, June 29, 1945, placed again under the control of the Department of Agriculture. It has an authorized capital of \$100,000,000.

The Corporation is empowered under its charter to buy and sell, lend upon, or otherwise deal in agricultural or other commodities. To finance these activities, it is permitted, under the act of Apr. 12, 1945, to borrow by the issuance of obligations guaranteed by the U.S. and not to exceed \$4,750,000,000.

Prior to the outbreak of World War II the Corporation was engaged principally in making loans to farmers on agricultural commodities stored on farms and in warehouses. Objectives were to help stabilize the prices of farm products, bring about the orderly marketing of farm products, and to accumulate supplies during years of abundance for use in years of shortage. Following the outbreak of war, operations were expanded to help increase the production of food, feed, and fibers for war needs. To this end numerous loan, purchase, and sales programs are now in operation. Commodities include practically all the food and feed grains, vegetable-oil crops, some truck crops, cotton, hemp, and naval stores.

The Corporation finances the purchase of food, feed, and fibers for Lend-Lease export, and helps to finance the domestic production of commodities formerly imported, and disposes of surplus food and of farm commodities for export at competitive world prices, pursuant to the Surplus Property Act of 1944.

Commodity Credit Corporation loans outstanding on all commodities totaled 415 million dollars on May 31, 1945, compared with 781 million on Mar. 31, 1943. Loan stocks included less wheat, corn, tobacco, naval stores, but more cotton than in March, 1943. Commodities owned by CCC totaled 763 million dollars on Mar. 31, 1944, compared with 885 million on Mar. 31, 1943. These commodities included wheat, tobacco, sugar, soybeans, cotton, and imported and domestic fats and oils.

President in 1945: Frank Hancock.

COMMONWEALTH FUND. This endowment, established in 1918 by Mrs. Stephen V. Harkness "to do something for the welfare of mankind," and later increased by gifts from the founder and from Edward S. Harkness, president of the Fund from its inception until his death Jan. 29, 1940, now amounts to approximately \$47,333,000. Appropriations in the year ended Sept. 30, 1945, were \$1,644,216.90. Activities tending to promote or maintain physical and mental health accounted for three quarters of this total. More than \$375,000 was appropriated for medical research. In medical education, fellowships were offered for advanced study; provision was made for visiting instructors in medical schools; aid was given to departments of preventive medicine and psychiatry, to teaching arrangements designed to promote interplay between medicine and psychiatry, and to various forms of postgraduate instruction for men in practice. Public health activities, designed to raise standards of rural service, centered in Tennessee, Mississippi, and Oklahoma. Fourteen rural community hospitals built or remodeled with aid from the Fund were at work during the year; these hospitals stress opportunities for professional education as well as standards of medical, nursing, and technical services. Personnel shortages remained general and embarrassing. The Commonwealth Fund Fellowships for British graduate students at American universities were suspended during the war, but fourteen fellowships for postgraduate study in medicine and public health were awarded in 1944-45 to Latin-Americans. The Fund published in the year eight new books of educational significance in its fields of operation. Since the beginning of the war the Fund has appropriated some \$1,500,000 for war relief and other purposes related to war needs, including the rehabilitation of men discharged from the armed forces with psychiatric disabilities. The directors of the Fund are: Malcolm P. Aldrich (president), William E. Birdsall, Phil W. Bunnell, Adrian M. Massie, Lewis Perry, Barry C. Smith, William E. Stevenson, and Thomas D. Thacher. Its offices are at 41 East 57th Street, New York 22, N. Y.

COMMUNICATIONS, Electrical. Wartime controls of international communications were rapidly and progressively relaxed following the cessation of hostilities. Principal exceptions at the year-end were occupation zones in Europe and in the Orient. Most of the major international channels had been reopened to commercial traffic and some new channels established in spite of limited availability of materials. Most ship-to-shore services were restored.

A 12-day telecommunications parley was concluded Dec. 4, 1945, between U.S. Government and British Empire delegates. Agreements reached should go a long way to expand communications throughout the world. Subject to approval by the

Foreign offices of the several British Commonwealths and to approval in the U.S. by both the State Department and the President, the agreements included the following points:

1. A World ceiling of 30 cents per word was established for full-rate messages and 20 cents for code messages. Proposed to be effective April 1, 1946, this new rate compares with present rates of \$1.05 per word from New York to Sarawak; to Singapore, 89 cents; to Bombay, 46 cents; to South Africa, 50 cents; to Ceylon, 48 cents. Proposed new press-rate ceiling of 6½ cents per word compares with such present rates as 18 cents per word from San Francisco to Bombay.

2. The gold franc was abandoned as the medium of payment and measure of telecommunications charges, in favor of the dollar on the basis of the pound sterling at \$4.03. Other countries may adopt the dollar-sterling basis by reciprocal agreements with the U.S. and the Commonwealths.

3. A protocol was signed between the U.S. and the United Kingdom acknowledging certain existing "exclusive arrangements" pertaining to telecommunications for certain other countries, but agreeing to discourage exclusive arrangements in the future.

Radar. Radar ranks second only to the atomic bomb in its significance as a wartime combat tool and in the extent to which its development and use were closely guarded military secrets. Radar as a word is coined from the contraction of the "radio detection and ranging" equipment and system to which it applies. Descriptively, radar can be defined as a powerful electronic "eye" which by means of ultrahigh-frequency radio impulses and echoes of these impulses accurately determines the presence and exact location of objects in space, under total darkness or other conditions which would prevent these objects being located by visual means. Specifically, a radar system: 1) generates ultrahigh-frequency high-powered electric waves, or pulses; 2) projects these waves or pulses from an antenna, in a closely controlled and usually very narrow beam—like a searchlight beam; 3) picks up the echoes of these waves or pulses that are reflected back by the objects upon which the rays impinge—again, similar to the seeing of an object by means of the light reflected back by it from a searchlight beam; 4) converts these echo pulses into a visible pattern on the fluorescent screen of a cathode-ray tube, the versatile tube long used in industry for many things including television viewers. Related electronic devices accurately time the intervals between outgoing pulses and incoming echoes, and thus accurately measure the distance to the reflecting object (for the impulses and returning echoes travel in a straight line and at the speed of light, 186,000 miles per second.) Other devices guide the reflector-like antenna to follow an enemy objective automatically even though both searcher and object may be in rapid motion.

Broadly classified, the hundred or more different types of radar fall into two general categories: 1) the "search" types, which sweep over wide and distant areas to detect the presence and approximate location of a target; 2) the "fire control" types which precisely locate, and accurately aim guns or bombs at, targets unseen by the gunners or bombardiers, assuring that the missiles will reach those targets even if they are moving. Both functions are combined in some radars, which employ relatively lower frequencies (longer wavelength) for broad searching and relatively higher frequencies (shorter wave lengths) for the more

accurate determination of exact location of the target. Refinements in search radars led to the development of equipment which put on the viewing screen in front of the operator the equivalent of an animated map, revealing ships, shore lines, islands, rivers, buildings, roadways, and other objects within the field of "view." This equipment, enabling the airplane operator to "see" otherwise invisible targets and surrounding objects, and enabling the pilot of a surface vessel to "see" otherwise invisible shorelines and other objects, was of especial importance to wartime air and marine navigation, and holds wide possibilities for peacetime navigation.

Radar enabled the embattled and outnumbered Royal Air Force fighter pilots to fend off the German air blitz of Britain. It opened the way for the Normandy landing. It enabled the destruction of German and Japanese war industry. It contributed greatly to the mitigation of the German buzz-bomb blitz on England. It sought out Japanese ground installations, ships, and planes from Guadalcanal to Tokyo. Germans and Japanese also had military radars, many of them reflecting excellent technique. They were, however, outclassed by the combined research of British and American scientists coupled with the mass production capacity of American industry. Wartime radar was exceedingly big and expensive business. Individual sets ranged from \$5,000 to \$90,000 in cost and from 35 tons or more for a land based set to about the weight of a man for airborne equipment. Radar equipment deliveries to the Army, Air Forces, and Navy up to July 1, 1945 totalled \$2,700,000,000; divided \$1,000,000,000 for airborne equipment, \$800,000,000 for ground equipment, \$500,000,000 for shipborne equipment, and \$400,000,000 for development and other miscellaneous related costs.

Radio. As radio broadcasting celebrated its 25th birthday in November, 1945, the promise of its near future included: the rapid development of a nationwide system of frequency modulation (FM) broadcasting stations, with static-free radio reception for the listener; facsimile broadcasting, and corresponding facsimile reception in home radio sets; rapid development of nation-wide television networks, with the capability of full color transmission and greatly improved quality of received image; a nation-wide system of high-powered clear-channel standard amplitude-modulated (AM) broadcasting stations, at intervals throughout the country on a plan designed to provide radio service to remote rural areas not now satisfactorily served.

Assignment of new frequency bands for FM broadcast was made in mid-year by the Federal Communications Commission, jumping the allowed frequency from the range 42–50 megacycles up to the range 88–108 megacycles. This decision was strongly contested by most equipment manufacturers and radio broadcasters alike, because it made obsolete all existing equipment. FCC stoutly defended its decision, however, stating that in the newly assigned frequency range, FM would have ample space to expand and would be troubled with much less mutual interference. This newly assigned frequency range will provide 100 FM broadcasting channels which, according to FCC, should accommodate something like 10,000 FM broadcasting stations in the United States, as compared with approximately 900 present standard (AM) stations. About a half-million FM home receivers and 33 commercial FM broadcasting stations will require equipment conversions to enable them to operate in the new frequency bands. Estimated cost for this conversion ranged from \$10 to \$20 for

each receiver and about \$10,000 for each broadcasting station.

Frequency modulation is a system of broadcast developed and long promoted by Major Edwin H. Armstrong of Columbia University, New York, N.Y. In this system, the electrical impulses which carry the speech or music signals through the ether are of constant amplitude but vary in frequency according to the instantaneous nature of the signal; in the standard or amplitude-modulation system, the frequency is constant and the amplitude varies. The important difference is, from the standpoint of the listener, that all manner of "static" ranging from thunderstorms to electric razors, are amplitude-modulated impulses and hence are picked up in the AM system and interfere with broadcast reception, whereas all such disturbances automatically are screened out by the FM system.

With 600 applications for FM broadcast licenses currently before it, and expecting from 2,000 to 3,000 more within the next five years, FCC divided the United States into two areas. Area I comprises southern New Hampshire, all of Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, and the District of Columbia; South-eastern New York as far north as Albany-Troy-Schenectady; Maryland, east of Hagerstown; and Pennsylvania east of Harrisburg. Area II comprises the remainder of the U.S. FCC also designated three types of stations: metropolitan, community, and rural. Metropolitan stations are limited to 20,000 watts effective radiation, and are required to have antenna 500 feet above the highest point of the local terrain within 10 miles. (In FM broadcasting, the height of the transmitter antenna largely controls the distance range of the station, as the signal transmission characteristic is similar to that of light or vision, and does not go beyond the horizon.) Community stations, designated to serve the smaller areas, are limited to 250 watts effective radiated power, with antenna heights of 250 feet. Rural stations, for service in widely scattered rural areas and smaller communities, will be allowed to have power as high as 200,000 watts effective radiation. In Area II, all three types of stations will be permitted. In Area I, because of the relative proximity of cities in this heavily populated area, only the metropolitan and the community classes of stations will be permitted.

Facsimile broadcasting received very little public attention during the war, but the military services were very much awake to its possibilities, and marked progress was made. Encouragement to facsimile broadcasting is given by FCC through its permission for FM channels to be used for such transmission when channels are not required for rural broadcasting. In Area II, the frequency range 106-108 megacycles has been allocated to facsimile broadcasting until such time as that service is transferred to its eventual place at 470-480 megacycles. Further impetus to facsimile broadcasting was given by the announcement in December, 1945, by a company that it had recently installed on top of a New York City skyscraper a new type of antenna and that within a month test broadcasting would be undertaken, with regular transmission of news, cartoons, pictures, and other printed matter to follow. It is the opinion of FCC engineers that facsimile broadcasting systems and receiving equipment will be developed rapidly as labor and materials become available.

Radio telephone developments, as distinct from radio broadcasting, made great technical strides under the pressure of wartime requirements. Adap-

tation of these to commercial and other telephone service already has begun. Two demonstrations were made in New York City in the fall of 1945, showing the practical application of theretofore secret microwave radio relay equipment originally designed for military service, to meet commercial communication requirements including telephone, telegraph, facsimile, and teletypewriter service. The Bell Telephone Laboratories demonstrated equipment known to the Army and Navy as AN/TRC-6 calling attention to it as the first and only American-built microwave radio relay communications system to have seen actual combat use by the armed forces, and one which had distinguished itself in both European and Pacific theatre service. The equipment uses radio frequencies of the order of 5,000 megacycles. In conjunction with similar equipment at Neshanic, N.J., 40 miles away, the equipment accommodated the simultaneous transmission of 6 telephone conversations, a facsimile transmission of a weather map, and 18 teletype messages. By looping the circuits, the equivalent of a 2,800-mile airline radio relay telephone circuit was demonstrated. Similarly, the Federal Telecommunication Laboratories, Inc., gave a demonstration of 24 simultaneous two-way telephone conversations over an 80-mile microwave relay circuit including two repeaters and operating at 1,300 megacycles on a single carrier frequency. Both these equipments utilized the pulse-time system of modulation, as distinct from amplitude modulation or frequency modulation. Pulse-time modulation was described briefly in the YEAR BOOK for 1944.

Plans for a general mobile radio telephone service which would bring the advantages of two-way voice communication to drivers of motor vehicles were announced by the American Telephone and Telegraph Company, in connection with the filing of applications with the FCC for authority to install such radiotelephone stations in Baltimore, Chicago, Cincinnati, Columbus, Denver, Houston, Milwaukee, New York, Philadelphia, Pittsburgh, St. Louis, Salt Lake City, and Washington, D.C. In addition, it announced that surveys are being made to determine the need and feasibility of mobile radio telephone service in many other cities and along certain highways of the U.S. The proposed system contemplates that subscribers' vehicles will be equipped with low power (15 watt) transmitters and receivers operating on fixed wavebands. The links between these mobile units and existing wire telephones will be through radio "central offices" which will be higher-powered (250 watts) transmitters and receivers erected at strategic points around a city, or along highways for rural or inter-city service. Effective range of such equipment would be limited to a 25 to 35-mile radius. Other possibilities for mobile radio telephone equipment includes bus, truck, and taxi fleets; large farms and ranches; railroads; and public utilities. Both utilities and railroads have been experimenting for some years with the use of mobile communications equipment, with eminent success, and are expected to pursue their programs more actively as equipment becomes available.

A radar-type of communication systems operating at 2,660 megacycles is to be installed on 160 miles of the Chicago Rock Island and Pacific Railway's double-track line between Chicago and Rock Island, Ill. By the end of the year, the FCC had recognised railroad-radio service, by issuing rules and regulations for the establishment of its Railroad Radio Service effective December 23, 1945. A featured provision of the proposed rules was that

eligibility for operating licenses in railroad-radio service will be confined to common carriers. Frequencies allocated by the FCC for this service are in the range from 158.43 megacycles up to and including 161.97 megacycles. Experiments conducted in collaboration with the Denver and Rio Grande Western Railroad enabled the new Rock Island communication equipment to be tested in actual operation through the Moffat Tunnel near Denver. Communication signals were reported to be constant and entirely satisfactory at all times through the tunnel, indicating that for the first time trains may pick up clear audible communication signals even while passing through tunnels and deep gorges, something that was impossible with prewar communications equipment. Radio communication tests, first begun by the Great Northern Railway in 1925, were resumed on a 30-mile section of the GN lines on the Mesabi Iron Range in Northern Minnesota, where communication is to be established between crews of ore train locomotives and several stations along the line.

Telegraphy. Indicating conviction that radio relay systems operating at the super-high frequencies, developed for such secret war projects as the military radar systems, will supersede conventional wired systems on heavy-traffic telegraphic circuits, Western Union Telegraph Company announced in October, 1945, that within the next 7 years it expects to link all major U.S. cities by radio relay. Only 6 months after setting up its first experimental circuit between New York and Philadelphia, Western Union thus was ready to proceed with a program that will make obsolete hundreds of thousands of miles of wire circuits in its present 2,300,000-mile telegraphic network. In their place will rise radio relay towers at intervals of around 30 miles (since radio relay depends upon line-of-sight transmission, spacing will vary according to terrain). Next step in the program is an enlarged "experimental" system interconnecting New York, Pittsburgh, and Washington, application for the operation of which was made to the Federal Communications Commission. This step is expected eventually to permit removal of some 2,500 miles of pole lines, 54,000 miles of wire and 160 miles of aerial and underground cable, between these three cities.

Each leg of the proposed circuit will have radio beams in each direction, each beam able to handle up to 1,080 telegrams simultaneously. The radio relay facilities, however, are expected to be used in part for other types of transmission, including facsimile, leased telegraph networks, and private telephone circuits for company use. Reports current at year-end indicate that the proposed change-over on major traffic circuits could be accomplished as far west as Kansas City within 5 years. The program is part of \$62,000,000 in Western Union improvements for which plans are definitely scheduled. The present New York-Philadelphia radio relay operates at a frequency of 4,000 megacycles. The new system is expected to use frequencies between 3,000 megacycles and 15,000 megacycles. Frequency modulation is employed, under a license agreement with Major Edwin H. Armstrong, holder of FM patents.

The 2,670-mile submarine Commercial Pacific cable between Midway and Guam, severed by the United States Navy as a security measure when war broke out with Japan, was restored to service December 21, 1945. Although the severed ends of the long cable line had been marked miles out to sea and tied to buoys, reports indicate that it was no small task to find and reassemble them. The

Army cable repair ship "Restorer," appropriately named, did the job. Before the war, this cable carried from 500,000 to 750,000 messages annually to Asia and key Pacific points.

Telephony. As the year 1945 closed, the United States telephone industry had accumulated approximately 2½ million applications for telephone service which could not be filled for lack of facilities; in addition, another half-million unfilled applications for residence extension telephones, and proportionately large numbers of applications for teletype and other services required for business and industry.

The postwar program of the Bell System lists the following: (1) Catching up with unfilled requests for service, which in turn, means extension of telephone switchboard, line, and other facilities to accommodate new telephones, etc.; (2) Replacements of temporary wartime expedients, and resumption of the prewar program of replacing obsolete equipment (for example, about 2½ million of the obsolete desk-stand type of telephone instruments remained to be replaced when war interrupted the rehabilitation program, and, in addition to those, about a million such instruments were returned to service to meet wartime needs); (3) Extending and increasing the capacity of the long-distance network covering the U.S., including provision for television and the use of ultrahigh-frequency radio relay equipment originally developed for the use of armies in the field; (4) Resumption of the program of replacing manual equipment by dial-type equipment, for local service, and extension of direct-dialing for short- and medium-distance toll calls; (5) Extension of two-way telephone service to such fields as motor vehicles, railroad trains, and coastal marine craft, also expansion of facilities for direct international overseas radio-telephone service; (6) Extension of facilities to bring telephone service to most American farms.

With reference to this latter point, Bell System resumed late in 1945 its prewar experiments in co-operation with the Rural Electrification Administration toward the development and establishment of a satisfactory system for superimposing telephone service on rural electric power lines by means of a small version of the high-frequency carrier system utilized on long high-voltage power transmission lines. Experimental installations have been made. The possibilities of radio, improved under war pressure, for remote rural telephone service also are to be investigated. With about a million rural customers now served and another million expected to be served by the Bell System within the next five years, and with parallel activity by the local independent elements of the U.S. telephone service industry, the great majority of American farms should have telephone service available to them by 1950 if not before.

Long-distance telephone lines steadily have been going underground over a period of many years. As of the end of 1945 about 70 percent—some 25,000 route miles—of the basic nation-wide network of interconnected telephone toll cable is underground. An additional 10,000 miles is planned by the Bell System for the next few years. Most important element in the extension of toll cable facility is the new transcontinental coaxial-cable line reported in the YEAR BOOK for 1944. Termination of the fighting of World War II has enabled this program to be expedited, the objective now being to reach Los Angeles with the new all-coaxial-cable line by the spring of 1947. Present plans for the coaxial-cable system call for four interconnected "Backbone" routes: 1) Atlantic Seaboard, from

New York to Miami via Atlanta; 2) Southern transcontinental, from Atlanta to Los Angeles and San Francisco; 3) Mid-western, from the east coast, probably Washington, to Chicago via Pittsburgh and Cleveland, with branch from Cleveland to Buffalo; 4) North-south route from Chicago to New Orleans via St. Louis and Memphis, intersecting the transcontinental route at Jackson, Miss. By the year-end about 2,000 of the approximately 7,000 route-miles of coaxial cable required for this project had been manufactured, and 1,500 miles of it was in the ground. As this cable becomes available, it is being installed in those locations which most urgently require additional toll-circuit facilities, thus at once meeting current needs and also providing successive elements of the ultimate plan. The system will accommodate television broadcast distribution as well as long-distance telephone service. A single pair of coaxial units can accommodate 480 telephone circuits. The cables being laid include up to 4 such pairs.

Another type of facility which also may prove important in strengthening the U.S. long-distance telephone network is the ultrahigh frequency (or also known as "microwave" or "microray") radio equipment developed for military use during the war. The Bell System has obtained FCC approvals for the experimental "radio-relay" system between New York and Boston, announced in the YEAR BOOK for 1944. As this radio system is limited to line-of-sight range, seven intermediate radio repeater stations are planned between New York and Boston. This experimental system will apply in the field of radio a principle long established on long-distance telephone lines: the insertion of amplification or "repeater" equipment at intervals along the whole length to bolster the signal strength and compensate for transmission losses. It was, for example, the application of repeater units to wire lines that in 1915 made possible the first direct transcontinental telephone conversation. Similar radio relay equipment is scheduled for early and extensive use by Western Union to replace long distance wire telegraph lines (q.v.).

Long-distance rates again were reduced effective July 1, 1945, by the Bell System, applying to calls over 790 miles. Example station-to-station daytime rates: Between New York and San Francisco, reduced from \$4.00 to \$2.50; between New York and Denver, reduced from \$3.25 to \$2.35.

Special telephone arrangements made for the United Nations Conference on International Organization held in San Francisco beginning April 25, 1945, are of some interest. By April 15 a special installation identified as "International 3300" was functioning. Traffic grew to some 23,000 toll calls per day, including some 4,200 really long-distance calls which represented about a 10 percent increase in the system load of long-haul calls. Five new "K-carrier" systems were added by Bell System to increase by 35 percent the long-haul talking circuits terminating at San Francisco. In addition to 16 teletypewriter circuits previously in use to San Francisco, 21 private-line teletypewriter circuits were added, 10 from New York, 3 from Chicago, and one from Dallas, principally for newspaper services; 7 from Washington, principally for government use. A flood of special radio programs also was distributed over wire lines from San Francisco, in addition to the other communication services.

Interesting wartime developments, tardily reported for security reasons, included announcement of successful wire laying from an airplane, and the completion of a new telephone line from Central Washington to Southern California, located

east of the Cascade and Sierra Nevada Mountains for security from enemy attack. For use in jungle areas and other inaccessible territory, a system was developed whereby 15 miles of telephone wire could be laid from a transport airplane operating at 150 miles per hour, both ends dropped by parachute to ground signal troops. In tests conducted in 1944 in the United States, a direct wire-telephone conversation was established for the first time between ground forces and airplane crew, lasting for the 4 or 5 minutes while the remainder of the wire was being paid out. In 1942 the Pacific Telephone and Telegraph Company built 892 miles of new pole line, added new cross-arms to 425 miles of existing pole lines, and strung 7,700 miles of wire to provide a north-south Pacific Coast telephone tie-line from Yakima, Wash., to Danby, Calif. This emergency line intersects all the east-west trunk lines and roughly parallels the Main Pacific Coast long-distance trunk line, but from 100 to 300 miles farther east, putting high mountain ranges between it and the coast then threatened with Japanese invasion. The line routing was established by aerial photo-survey made from heights of from 17,000 to 22,000 feet, which proved to be so accurate and revealing that 95 percent of the original route was unchanged by the subsequent ground surveys which opened the way for actual construction.

Indicative of the extent to which telephone equipment, in addition to all other signal and communication equipment, was used in War operations, is the Navy report that in a single landing operation against a Jap-held Pacific stronghold the 700 odd ships participating were equipped with more than 48,000 telephones using more than 1,000 miles of telephone cable of various sizes. Requirements for each ship of typical classes were given as follows:

Ship	No of Telephones	Feet of Cable
Battleship—Iowa Class	1,556	155,600
Carrier—Essex Class	1,358	135,800
Light Cruiser—Cleveland Class	902	90,200
Destroyer—Fletcher Class	230	23,000
Destroyer—Escort	169	16,900
Attack Transport	200	20,000
Landing Ship—Tank	63	6,300
Landing Ship—Medium	32	3,200
Landing Craft—Infantry—Large	11	1,100
Motor Torpedo Boat	10	1,000

Television. In its re-allocation of the spectrum of operating frequencies for radio communication, the FCC allotted to television 13 channels below 300 megacycles, and also 28 channels above 400 megacycles for future use. In view of the line-of-sight transmission characteristics of television broadcast, the new 13-channel system is adequate to accommodate about 7 stations in the New York City metropolitan area, and at least one each in the 140 other major cities and towns in the United States. Successful demonstration of 525-line color television in the frequencies above 400 mc lead to the expectancy that network color telecasts soon may be on a daily basis. Further, engineering reports indicate that television will not be ready for complete service to the public before some time in late 1946 or early 1947, and that in the meantime experiments with the superior results of the higher frequencies well may be expected to swing television to those frequencies by public demand. Such an event would appear to benefit frequency-modulation radio broadcast as much as television, by releasing to the seemingly unlimited potential of FM the frequency ranges now assigned to television. This school of thought was bolstered by a

successful demonstration in December of three-dimensional full-color television broadcast at 10,000 megacycles, about 20 times as high up the frequency spectrum as even current experimental television broadcasting. A terrific tussle is going on in the television industry between the proponents of immediate activation of television systems on the basis of black-and-white pictures and presently developed frequencies, and the proponents of holding off for a few more months to enable development of the superior and broader qualities (color and sharp definition) of the ultra high-frequency ranges pioneered so successfully under military necessity. The crux of the matter is that if the public buys expensive sets for the one, they won't work on the other. One demonstration was the telecasting of New York City's Navy Day Dinner at the Waldorf-Astoria Hotel under conditions of ordinary low-level ballroom lighting. In another demonstration, an "Image Orthicon," made sensitive to infra-red radiation, penetrated visual darkness to pickup and televise a model "illuminated" only by invisible infra-red radiation.

Many industrial and commercial applications suggest themselves for this new television tube. For example, the new camera could televise the melt in a steel mill where the control of subvisual temperatures is important. Again, a department store in Philadelphia indicated a commercial application by using the equipment in its store auditorium to pickup and send to 20 viewers in different parts of the store various equipment demonstrations, costume modelings, and other visual sales aids calculated to attract customer attention. Development of the Image Orthicon began shortly before the war, but the adaptation of the supersensitive camera to various military needs vastly expedited its perfection.

Another noteworthy technical refinement in television is the adaptation of the ultrahigh-frequency pulse-transmission characteristics of military radar to enable both the audible and the visual signal impulses of telecast transmission to be made on a single frequency instead of on separate frequencies as heretofore. This simplification would reduce the duplicate transmitting station equipment now required, and correspondingly reduce the complexity and cost of receivers. The operating principle is to transmit alternately a "pulse" of energy for the visual part and a "pulse" of energy for the audible part of a sight-and-sound telecast, and to do this so rapidly (15,750 times per second) that, through the human quality of persistence of vision and persistence of hearing, both sight and sound produce the effect of being continuous and unbroken.

As 1945 came to a close, some important technical problems remained to be settled before the public could expect to settle down in front of versatile and dependable home receivers with desirable assurance against excessive obsolescence resulting from technical developments or trade competitions. Sets were being announced, ranging from table-top models with 5 x 7-inch viewing screens at about \$100 to "home theater" models at \$1,500 complete with 8 x 4-ft. screen and radio-phonograph combinations including FM. At least two projects had been announced contemplating public "television theaters." A bed-ridden litigant "appeared" in a Los Angeles court to give testimony via television and radio. Inaugurating an experimental program of intercity telecasting via one link in the Bell System's growing network of coaxial-cable trunk lines, the Army-Navy football game in Philadelphia December 1 was "piped" to

New York and there telecast. Tests were scheduled to be made of the broadcasting of television and FM radio programs from an airplane operating about 30,000 feet above the earth. Proponents of the experiment were hopeful of showing that the line-of-sight limitations characteristic of both television and FM broadcasting could be offset and the effective radius operation of a single station increased from 25 miles to 200 miles. A low-powered ground station would transmit programs to the plane which would rebroadcast them simultaneously.

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COMMUNISM. Neither the theory nor the practice of Communism in 1945 can be discussed without reference to the Soviet Union. In the minds of the great majority of Americans, Communism simply is the system of politics and economics now existing in the Union of Soviet Socialist Republics. Communists themselves, of course, do not make such a claim. Communism, in the sense of the classless society predicted by Marx and Lenin, remains a goal to be achieved. They do insist, however, that Russia is following the one and only path to Communism, and this faith in the Soviet Union is so strong that they are more directly influenced by its practices than they are by Marxist-Leninist theories. Since the dissolution of the Communist International in the spring of 1943, there have been no official ties between the Communist Party of the Soviet Union and the Communist parties of other countries. Whether there have been secret connections is in effect an academic question, for the Communists of other lands habitually seek, with or without directives, to co-ordinate their policies with those of the U.S.S.R. A few individuals, notably disciples of the late Leon Trotsky, regard themselves as true Communists and charge the followers of Stalin with departing from the teachings of Marx and Lenin. To the members of the Communist Party this is heresy of the rankest kind. As they see it, a great Communist victory was achieved in Russia in 1917, and since then the principal duty of all Communists has been to preserve the gains thus made. They look on Russia as a mighty fortress of the Communist cause, which must be held at all costs. Though plans of world revolution may not have been theoretically abandoned, they have necessarily been pushed into the background, while attention is focused on the immediate needs and purposes of the Soviet Union.

It follows that the most important Communist phenomenon of 1945 is the emergence of the Soviet Union as one of the world's two great powers. This phenomenon, as we shall see, has had a vast influence on Russia's neighbors in Europe and Asia. It has also strongly affected public opinion in the United States. On the one hand, with the growing realization that the chief threat to peace in the coming decades is the possibility of a clash between the United States and Russia, many influential Americans, whatever their political views, have made a strong effort to bring about better relations between the two countries. For example, the politically conservative New York *Herald-Tribune* devoted one entire session of its 1945 forum on world problems to the U.S.S.R., and selected several speakers known to be sympathetic to that country. On the other hand, the new manifestations of Soviet power have inevitably intensified fear and distrust. In some quarters hostility has been openly expressed, but more important than the sporadic heckling of

the Soviet Union or the open talk of war is a deep undercurrent of suspicion.

The Nature of Soviet Communism. The influence of the Soviet Union upon the development of Communism throughout the world is obvious. The problem is to characterize the political and economic system that actually exists within Russia today. For one thing, it is as difficult as ever to obtain objective information. For another, the system cannot be described in a single word or phrase.

Certain statements can be made with some assurance. In the first place, the government continues to be a dictatorship. It is true that Russian leaders and publicists invariably refer to the government as a democracy. *Pravda*, for example, described it as "a much higher form of democracy than any other form of power known to history," and Commissar Molotoff, in his speech on the 28th anniversary of the revolution, spoke of "a true democracy of the people." Representative institutions, however, continue to function only in nominal ways. On June 22, for instance the Supreme Soviet met in its 12th session and listened to the Chief of Staff's proposal for demobilization. The next day the Supreme Soviet unanimously approved this proposal and adjourned. The Communist Party is still the only party permitted to exist in Russia, and there is no opposition press. An elaborate campaign preceded the elections of February, 1946, though there was only a single slate of candidates.

Some other tendencies may be noted. Inequality of income, which greatly increased in the 1930's, apparently has not diminished during the war. Many privileges that were granted to women in the early years of the revolution have been withdrawn, and Soviet officials have pointed with satisfaction to the resulting rise in the birth rate. Although there is no evidence of a rebirth of religion, the Greek Orthodox Church has been given increasing freedom during the war, and the Church on its part has loyally supported the government. In May, Patriarch Alexei of Moscow thanked God for Stalin and spoke of the Orthodox Church's "complete unity with the government." Nationalist sentiment, which was on the increase before the war, was naturally stimulated by the conflict with Germany, which is officially referred to as the Patriotic War. David Dallin, in the *New Leader* for Nov. 24, 1945, finds evidence of a retreat from nationalism, and predicts a conflict between military and political authorities on this issue. The nationalist note, however, is still strong in various publications that have reached the United States from Russia. Molotoff's speech on the anniversary of the revolution, which made no allusion to Marx and only a single reference to Lenin, praised Stalin as a great national leader.

The tendencies mentioned are at least in apparent conflict with the conceptions of Communism advanced by Marx and Lenin. On the other hand, there is not the slightest indication of a restoration of capitalism in any ordinary sense of that word. The means of production are firmly in the hands of the state, and there appears to be no prospect that they will be relinquished.

Russia's Sphere of Influence. In the European countries that lie close to Russia, a clear pattern of Communist activity has emerged. In the first place, the Communist Party itself has nowhere taken power. Power is held by a united front, usually composed of leftist parties and elements of the resistance movement. This united front, however, is dominated in varying degrees by the

Communists, and usually Communists—often men who have spent some time in the Soviet Union—serve in key positions. Complete nationalization of the means of production is never the program of these united front governments, but they commonly adopt reforms in land ownership. Sometimes no opposition to the united front is permitted. Collaborationists and fascist sympathizers are liquidated or suppressed, and there is some evidence that critics of Soviet policy are likely to be classed as pro-fascist. Friendship with the U.S.S.R. is always the basic article of foreign policy.

This is the system that operates in Yugoslavia, Czechoslovakia, Poland, Bulgaria, Rumania, and Albania. In a modified form it operates in Finland. Something of the same sort was established in Hungary and Austria after the liberation of those countries, but the situation, as is noted below, was changed by the November elections. The situation in Germany is still obscure, but in the Russian zone the Communist Party is one of four anti-fascist parties recognized by the occupation authorities, has a large representation on the Berlin City Council, and is negotiating with the Social Democratic Party with regard to the formation of a single Workers' Party.

It is in Czechoslovakia and Yugoslavia that "revolution from above," as the system has been called, has functioned most efficiently. The Czech government in exile, which from the first had emphasized its friendship for the U.S.S.R., was welcomed to Prague soon after the liberation. A National Bloc, made up of Communists, Social Democrats, and National Socialists, controls the government. Communists hold 90 out of 300 seats in Parliament and 4 out of 11 cabinet posts.

In Yugoslavia the resistance movement was for some time divided, but Marshal Tito (Josip Broz), a Communist, had won his struggle with General Mihailovich before the liberation of the country was completed. By the time Tito's Partisans linked up with the Red Army in September, 1944, his supremacy was generally recognized at home and abroad. Most observers agree that many of Tito's followers are not Communists, but they also agree that Communists play a large part in his government. Of the five most influential cabinet members in the autumn of 1945, three were avowed and two were alleged Communists. In the voting on Nov. 11, 1945, for members of the constituent assembly, the voters were offered only a single slate, inasmuch as opposition parties had decided to abstain from the election on the ground that it would not be free; 90 per cent of the votes cast favored Tito's Fatherland Front.

In Poland conflict continued throughout 1945. The Polish Committee of National Liberation, which had established itself in Lublin in July, 1944, with the participation of the Communist Party and the support of the Soviet Union, proclaimed itself the Provisional Government of Poland early in 1945. This government was transferred to Warsaw soon after the liberation of that city, and was expanded to include Stanislaw Mikolajczyk, a Peasant Party leader, and other representatives of the Polish emigrés. The free elections to which the Soviet Union, Great Britain, and the United States agreed on July 22, 1945, have not yet taken place.

In Rumania, after the fall of the Radescu government on Feb. 28, 1945, the National Democratic Front took power with Petru Groza as premier. Iuliu Maniu, leader of the National Peasant Party, the largest party in the country,

has opposed the Groza government. On Nov. 8 rioting took place, and the Communist press charged Maniu, among others, with being responsible. Shortly afterward it was reported that the Peasant leader had disappeared. The Minister of Justice and the Minister of the Interior in the Groza government are Communists, and Vasile Luca, a member of the political bureau of the Rumanian Communist Party, is secretary general of the National Democratic Front. After the Moscow meeting of foreign ministers, the Cabinet was reorganized to include a Liberal and a representative of the Peasant Party.

In Bulgaria there is a Fatherland Front, in which the Communists originally cooperated with the Social Democrats and the Zveno, a left-wing agrarian party. By the summer of 1945, however, many non-Communist elements in the front were moved to protest against Communist domination and to ask the Allied Control Commission to supervise the election scheduled for Aug. 26. After the protest of Great Britain and the United States, the election was postponed, but, in spite of further protest, it was held on Nov. 18. Critics of the Communist Party urged their followers to boycott the election, but Sofia and Moscow announced that 80 percent of the electorate voted and that 3 out of every 4 votes favored the Fatherland Front. When reorganization of the Cabinet was undertaken, in accordance with the decision of the Moscow Conference, the opposition wings in the Agrarian and Social Democratic Parties urged that the Ministries of Interior and Justice should go to non-Communists "so that the freedom of Bulgarian citizens can be guaranteed."

In Finland the Democratic League—made up of Communists and some dissident members of the Social Democratic Party—polled 408,658 votes in the election of March 17 and 18, some 24 percent of the total; 49 members of the Democratic League, 40 of them Communists, hold seats in the Finnish parliament, and six members of the League are in the cabinet. Ville Pessi, general secretary of the Communist Party, states that it has 20,000 members. One of its major aims is the encouragement of an alliance between Finland and the U.S.S.R. Yrjö Leno, Communist Minister of the Interior, controls the police and the censorship.

In general it may be said that Communist parties have gained in strength everywhere in Eastern Europe. It is doubtful, however, if they are anywhere in the majority. In Hungary, indeed, on Nov. 4, they polled only 17 percent of the votes cast, and in Austria two weeks later only 5 percent. Even in these countries, however, they have been given cabinet positions in spite of their poor showing, and elsewhere, as has been pointed out, their power is out of proportion to their numerical strength. To explain this, sympathetic observers say that Communist leadership in the various left-wing fronts was won by heroic activity in the struggle against the Nazis, that the disfranchisement of fascist elements is both just and necessary, that Communist land reforms are deservedly popular, and that admiration for the Soviet Union is naturally strong in the emancipated countries. On the other hand, it is charged that the Communists, after seizing strategic positions, have used their power to prevent the expression of opposition and have established virtual dictatorships.

If it is asked whether the Soviet Union has actively interfered in the domestic affairs of Eastern European countries, one can only say that

the evidence is confused. In another quarter, however, in Iran, there seems to be a clear case of Soviet cooperation with local Communists. The separatist movement in the northern province is the work of the Democratic Party of Azerbaijan, whose leadership is openly Communist. When Persian military forces acted to suppress this separatist movement, they were checked by the Red Army.

Elsewhere in Europe. The end of the war found Communism stronger almost everywhere in Europe. In some countries the gains, though relatively large, did not entitle the Communists to major influence. In Sweden, for example, they claimed 35,000 members, as opposed to 18,000 in 1939, but were weak in comparison with the Social Democrats. In Denmark, in the autumn of 1945, they increased their representation from 3 to 18, but remained the smallest of the major parties. In Norway they won only 7 seats in the Storting, as against the Labor Party's 75.

In France, on the other hand, the party claimed a million members and led all other parties in the election of Oct. 21. This extraordinary showing may in large measure be explained by the energetic and courageous part played by Communists in the resistance movement. The emergence of the Communist Party as the strongest single party in the National Constituent Assembly created immediate difficulties, for it was the party's request for certain cabinet posts that led to General de Gaulle's threat of resignation. Although a compromise was found, the Communists bitterly resented de Gaulle's suggestion that their primary loyalty was to the Soviet Union, and it seemed certain that the issue would arise again. In domestic affairs, as France moved towards nationalization of basic industries, the Communists took a position slightly to the left of the other parties.

In Italy the Communist Party is led by Palmiro Togliatti, who returned from Russia soon after the invasion. Communists were active in the National Committee of Liberation, which coordinated the resistance movements in northern Italy prior to the completion of the war. As cabinets have come and gone, the Communists have shown themselves rather more moderate than the Socialists. They oppose the monarchy, but believe that action should be postponed until a peace treaty is signed and an election held.

In Spain the Communist resistance movement is said to number some 20,000 active members. Communists have also participated in negotiations regarding the establishment of a Spanish government in exile. In September, when representatives of the various anti-fascist parties met in Mexico, the Communists strongly supported Juan Negrin. When Giral was chosen prime minister of the government in exile, the Communists refused to enter the cabinet.

The situation in Greece is of particular interest because Russia has apparently recognized that Greece belongs to Britain's sphere of influence. The Soviet Union remained silent when Britain intervened in the civil war of the winter of 1944-45, despite the fact that Communists were active in the National Liberation Front (E.A.M.) The Communists have continued to agitate against British interference and against the return of King George. The Union for Popular Democracy and the Socialist Party have lately withdrawn from the E.A.M., but it continues to have a considerable following.

England is almost the only European country in which the Communist Party did not make signif-

icant gains in 1945. Communists polled only 102,780 votes in the general election of June, and elected only two members of Parliament. It should be observed, however, that by and large the Communists supported the Labor Party and contested only 21 seats. At the general convention of the party in November, Harry Pollitt, its secretary, vigorously criticized the foreign policy of the Labor government and demanded the removal of Foreign Secretary Ernest Bevin. At the same time he warned against unnecessary strikes, saying that industrial peace was needed to keep Britain in the front rank of world powers.

United States. On May 20, 1944, the Communist Party of the United States was dissolved by vote of its national convention, and the Communist Political Association was created. Earl Browder, for many years general secretary of the party, was elected president of the association. "American Communists," Browder wrote in *Teheran*, "are relinquishing for an extended period the struggle for partisan advancement for themselves as a party. The Communists foresee that the practical political aims they hold will for a long time be in agreement on all essential points with the aims of a much larger body of non-Communists, and that therefore our political actions will be merged in such larger movements." In the year following, American Communists exerted a restraining influence on whatever movements they participated in. They exhorted labor unions to keep the no-strike pledge, tried to persuade Negroes and other minorities not to press their demands, and indicated their willingness to cooperate with the most conservative politicians and business men so long as these were not hostile to the Soviet Union.

Then, almost a year to the day after the formation of the Communist Political Association, the *Daily Worker*, Communist newspaper, published a translation of an article by Jacques Duclos, a leading French Communist, that had appeared in *Cahiers du Communisme*. "Nothing justifies the dissolution of the Communist Party of the United States," this article said, accusing Browder of "deviations" and "dangerous opportunist illusions." In an introduction to the article as it was published in the *Daily Worker*, Browder stated that it unquestionably reflected "the general trend of opinion of the European Marxists in relation to America." He announced that there would be open discussion and then a meeting of the national committee.

In the discussion that followed in the party press, one Communist after another approved of Duclos' criticisms. Leaders of the party admitted that they had been at fault but held Browder principally responsible. On June 2 the national board of the Communist Political Association took steps to reestablish the Communist Party and adopt a more militant program. Browder alone opposed this action. William Z. Foster, leader of the Communist Party in the 20's and a persistent critic of Browder's position, was commended for his fight against opportunism. Three weeks later the national committee, by a vote of 53 to 1, approved the actions of the national board, described Browder as "the chief architect of revisionism," and called a special national convention for July 26.

In the controversy that preceded the convention Browder accused Foster of "the purest anarcho-syndicalism," and Foster replied by calling Browder a "bourgeois reformist." Other critics pointed to the decline Communist activity and

the decay of morale that had taken place during the period of "Browderism." John Williamson stated that the Communist Political Association had few members in basic industries, that discipline had been lax, and that the payment of dues had declined.

Unlike the convention of 1944, the special convention held its sessions in private. Browder continued to defend his position, but announced that he would abide by the decisions of the convention. In a long report Foster accused Browder of abandoning Marxist and Leninist theories, of setting up a personal dictatorship over the party, and of plotting a world-wide revisionist movement. Browder was formally removed from office, as were Robert Minor and James Ford. The Communist Party was reestablished, and Foster was named chairman.

Some time will be necessary before one can perceive how far to the left the Communists are swinging. At a meeting of the national committee on Nov. 18, Foster said, "Our party is reestablishing its policy upon a Marxist-Leninist basis, has put itself in line with actual economic and political conditions. It is basing itself upon the firm conclusions that imperialism is not dead but very much alive; that the class struggle remains decisive in capitalist society; and that there is an indispensable need of the Communist Party to lead the struggle of the masses." The reassertion of the decadence of capitalism and the necessity of socialism has become prominent in the Communist press, and there has been more emphasis on American imperialism than at any time since the German attack on Russia. There has also been some slight revival of talk about a labor party. Communists have conducted a vigorous campaign for the withdrawal of American troops from China, and have been intensely critical of Secretary Byrnes's policy towards the Soviet Union. In the strike situation that developed in the winter of 1945-6, Communist influence seemed to be exerted on the side of militancy.

When the new policy was being discussed, some observers held that the change would affect the New York City elections by weakening all organizations linked in any way with the Communists. On July 23 Benjamin B. Davis, Jr., Communist and Democratic candidate for councilman, announced a more militant Communist policy with regard to Negroes, and the Democratic endorsement was withdrawn. However, Davis was elected to the city council, and so was Communist Peter Cacchione of Brooklyn. The two American Labor Party candidates regarded as being closest to the Communist Party—Eugene Connolly and Michael Quill—were also elected.

Other Events. Several times during the year Communists figured in the news. In February the *Chicago Tribune* revealed that the Army was permitting Communists to receive officer training if there were no evidence of disloyalty, and this policy was defended by Asst. Sect. of War John J. McCloy. In March the board of directors of Freedom House refused a gift of \$5,000 from the Communist Political Association for the Wendell Willkie Memorial Building Fund. On June 19 the Supreme Court refused to uphold the order for the deportation of Harry Bridges, Australian born leader of labor on the West Coast. The court held that cooperation in the legal activities of a subversive organization did not in itself constitute subversiveness. In October Louis Budenz, editor of the *Daily Worker*, announced that he had been converted to Catholicism, had left the Commu-

nist Party, and would teach economics at Notre Dame University.

Elsewhere in the Americas. In most Central and South American countries Communists were active during 1945. Particular interest attaches to events in Brazil and Venezuela. Getulio Vargas, who had been strongly anti-Communist at the outset of his regime as president of Brazil, became more conciliatory as the time for elections drew near, and the Communists supported him until the very eve of his overthrow on Oct. 29. In the elections of Dec. 2, the Communist candidate for the Presidency won 600,000 votes, or 10 percent of the total. The Secretary of the Party, Luis Carlos Prestes, long imprisoned by Vargas, has become an important political figure.

In Venezuela, also, Communists appeared to be on the side of the status quo, supporting the government of Gen. Isaías Medina, which was deposed by the army on Oct. 18. The revolutionary Junta subsequently released Rudolfo Quintero, a leading Communist, who was imprisoned at the time of the revolution.

China. Nowhere was the situation more important or more confused than in China. At the end of the war with Japan, Chinese Communists dominated an area inhabited by 80,000,000 people. During the war there had been repeated conflicts between the Communists and the Nationalists, and civil war seemed likely to follow the surrender of Japan. However, agreements between the U.S.S.R. and the Chinese central government with regard to Manchuria eased the situation, though Chiang was forced to make considerable concessions to Russia. Then, in January, 1946, representatives of the Communists and the central government, in consultation with United States Ambassador Marshall, succeeded in arranging a truce, and, though friction has continued, the unity of China seems to be a possibility.

Many American observers have been impressed by the Chinese Communists' heroism, their self-sacrifice, their fanatical devotion to a cause. Moreover, so experienced a student as Owen Lattimore, one time adviser to Chiang Kai-shek, maintains that the Communist regime has been successful. The Communists, he says, are backed by most of the people in the area they control. Food and clothing are better in this area than in other parts of China, and the incidence of taxation is more equally distributed. Moreover, the political structure is more democratic. By a ruling adopted in 1941, Communist Party members may fill only one-third of local offices.

The question of the Communism of the Chinese Communists has been much discussed. Harrison Forman, for instance, stated in *Report from Red China*, "Chinese Communists are no more Communist than we Americans are." According to Liu Shao-chi, head of the political bureau, "The Communist Party's program for China at present is one of democratic capitalist development based on state, private, and cooperative enterprise." Most observers agree that the policies of the Communists are now moderate enough, but the party's leaders make it clear that they regard democratic capitalism as a transient phase that will eventually give way to socialist collectivism. "China's revolution," stated Mao Tse-tung, the chairman of the party, in 1941, "is a magnificent part of the world revolution."

It should be remembered that in 1945 immediate collectivization was not a Communist demand anywhere in the world. Allowing for elements in the Chinese situation that are wholly

unique, one can perceive the same basic pattern that has been discerned elsewhere. The present demand is for a coalition of progressive elements to work for a program of moderate reforms, but ultimate goals are not forgotten though they are not stressed. Moreover, though the Soviet Union's behavior with regard to China's intestine quarrels seems to have been circumspect, the close relationship between Chinese Communists and Russia is obvious. Mao Tse-tung was a member of the Communist International prior to its dissolution, and before Russia was involved in the war, he denounced it as an imperialist struggle. Speaking of China's war with Japan, he said, in 1941, "Without the help of the Soviet Union, final victory is beyond imagination." At the end of a long controversy with Lin Yutang in the *Nation*, Edgar Snow, a staunch admirer of the Communist regime, wrote, "There is also no doubt that the Chinese Communists are very close in their sympathies to the U.S.S.R. and that during the war they have sought to defend Soviet policies." In the progress that has been made towards peace in China, both the Soviet Union and the United States have played a part. So far as the Chinese Communists themselves are concerned, it may be fair to say that they have chosen to work for influence in the whole of China instead of maintaining their exclusive rule in a portion of the country.

Elsewhere. In Japan the Communist Party is small but growing. At first it urged the removal of Emperor Hirohito, but subsequently modified its position in the interests of forming a People's Front. In Korea, although the Communist Party has only 7,000 members, it has demanded an important role in the government. Soviet publications have approved the independence movements in Indonesia and Indo-China, and there are Communists among the leaders of the uprisings in both countries. In the Philippines Communists won considerable influence by their participation in guerrilla warfare against the Japanese, and have agitated for agrarian reform. To all the peoples along Russia's Asiatic frontier, writes Owen Lattimore, the Soviet Union has "a great power of attraction." In their eyes it stands for "strategic security, economic prosperity, technological progress, miraculous medicine, free education, equality of opportunity, and democracy." And this, as Mr. Lattimore concludes, is a powerful combination.

GRANVILLE HICKS.

COMMUNITY CHESTS AND COUNCILS, Inc. A national membership association of community and war chests and councils of social agencies, organized in February, 1918, as a national clearing-house of ideas and service for community chests and councils of social agencies. For description see *YEAR BOOK* for 1939. Of the 1,142 chests and councils in operation in August 1945 (820 chests and 322 councils), 784 chests and 303 councils were in continental United States, 4 chests and 2 councils in Hawaii, 29 chests and 17 councils in Canada, 2 chests in South Africa, and 1 chest in the Virgin Islands. Almost every city in the United States (except New York City, which has a limited joint financing organization) in 1944 had a community chest or similar plan of federated financing for its voluntary social services. In 772 cities in 1944 more than twenty million contributions, totalling \$221,272,950, were given to community chests and war chests to be used during 1945 for voluntary social work in their communities and for National War Fund agencies.

Officers of the association for 1945 are: Honorary President, Gerard Swope; President, E. A. Roberts; Vice Presidents, J. B. Adoue, Jr., H. L. R. Emmet, Mrs. DeForest Van Slyck and Harry P. Wareham; Treasurer, Milton H. Glover; Secretary, Robert P. Lane. Address: 155 East 44th Street, New York 17, N. Y.

COMMUNITY TRUSTS. Charitable trust funds aggregating \$67,041,684 were reported by 76 community foundations in the United States and Canada at the beginning of 1945. Their resources were \$45,000,000 in 1935 and \$13,500,000 in 1925. The New York Community Trust administers 62 funds totaling \$15,871,000, the Chicago Community Trust stands at \$11,498,000, followed by the Cleveland Foundation with \$8,624,000, and the Winnipeg Foundation with \$3,561,000. Philanthropic outpayments by these trusts in 1944 rose to \$1,981,000 from \$1,739,000 in 1943. The most sizable disbursements were in New York, \$558,746; Cleveland, \$279,000; Chicago, \$268,000; and Boston, \$256,000. The largest receipts of funds by community trusts in 1944 occurred in New York where \$4,650,000 was received. Additions in Los Angeles were \$723,000; in Chicago, \$675,000; and in Hartford, \$500,000. Three new community trusts were created in 1944 in Columbus, Ohio, Spartanburg, North Carolina, and Champaign, Illinois.

Community trusts ordinarily place investment responsibility in trustee banks designated by contributors, and lodge distributional power in a citizens' committee authorized—also by the donors—to adapt its disbursement policies to the evolving requirements of current social needs. This procedure is designed to avoid obsolescence and keep funds effectively employed despite changing conditions.

The New York Community Trust, with Ralph Hayes as Director, has offices at 120 Broadway, New York City.

COMPTROLLER OF THE CURRENCY, Bureau of the A. Bureau of the U.S. Department of the Treasury which has general supervision over national banks; established 1863. Comptroller: Preston Delano.

CONCILIATION SERVICE, U.S. The function of the Conciliation Service, in the United States Department of Labor, is the settlement of labor-management disputes through voluntary methods of conciliation, arbitration, and technical surveys. The fiscal year 1945 followed the pattern of the other war years and brought an increased case load to the Service, raising the number of cases handled from 5,599 in the fiscal year 1941 to 25,907 in 1945. The regional offices have been increased to seven located in Boston, New York, Atlanta, Cleveland, Chicago, Kansas City, and San Francisco.

The Conciliation Service handles all types of cases: strikes, lockouts, threatened strikes, controversies, and sundry disputes. Any representative of labor, management, or the public can secure the services of a Commissioner of Conciliation by writing, wiring, or phoning the Regional Director of the Service in the region in which the dispute occurs or by contacting the Washington Office. The Service now has a staff of 275 Commissioners of Conciliation, chosen for their knowledge and experience in the field of labor-management relations. They are stationed in the important industrial and commercial centers of the country.

When a Commissioner of Conciliation enters a

case, his first efforts are directed toward getting a clear picture of the whole situation, followed by efforts to persuade the parties to settle their differences by compromise rather than by an appeal to strike or lockout. This involves the following: (1) interviews with both parties; (2) plans for joint conferences; (3) removal of the conference table from scene of conflict; (4) open consideration of issues involved; (5) establishment of off-the-record feeling of confidence through informal conversations; (6) acceptance of points of mutuality; (7) maintenance of status of Commissioner as impartial negotiator; (8) encouragement of conflicting groups to work out their own solutions.

Nearly 26,000 cases were handled by the Service during the fiscal year from July 1, 1944, through June 30, 1945, involving more than 14½ million workers. Strikes and threatened strikes involving 3½ million workers accounted for more than five thousand of these cases. The majority of these situations were settled by the Service alone, but a little more than one-fourth could not be settled by the normal mediation and conciliation processes and were referred or certified to the National War Labor Board for final determination under its extraordinary wartime authority. With the closing up of the War Labor Board and labor relations divisions of the military and war agencies, the Conciliation Service faces 1946 as the only federal agency, aside from those dealing with railway disputes, responsible for maintenance of industrial peace throughout the country.

The facilities of the Service were used in 28 major industrial fields, such as building trades, manufacture of food, iron and steel, textiles, transportation equipment, etc., and were utilized by employees and employers in 48 States, the District of Columbia, Alaska, Puerto Rico, Hawaii, and the Virgin Islands.

EDGAR L. WARREN.

CONGREGATIONAL CHRISTIAN CHURCHES, The General Council of the. A general council was instituted at Seattle, Wash., June 27, 1931, when the National Council of the Congregational Churches in the United States and the General Convention of the Christian Church merged their activities in this new organization. The next biennial meeting of the General Council will be held at Grinnell, Iowa, June 18-25, 1946.

The headquarters of the General Council of the Congregational Christian Churches are at 287 Fourth Avenue, New York City. Those of the Board of Home Missions are at the same address, with offices also at 14 Beacon St., Boston, Mass., and those of the American Board of Commissioners for Foreign Missions at 14 Beacon St., Boston, Mass.

The present membership is 1,113,930, a net increase of 20,650 over the previous year, the largest net gain for some years. The total number of additions for the year was 70,928. The Church School enrolment is 489,677, a decrease of 14,554. This decline is accounted for by two facts, first, many young persons of church school age are in the armed services, and while absent their names are withdrawn from the roll. Second, the church school has been changing its emphasis, and has become a school for children and youth rather than a general meeting of the people old and young. For older persons the church now provides other educational activities, in which 3,417 churches reported enrolment of 566,866. The churches raised for local church support \$17,467,525, and for benevolences \$3,350,919.

CONSTRUCTION INDUSTRY. With the end of the war in Europe (May) and in the Pacific area (August) this industry turned away from its varied war activities and faced the problems of a postwar or transition period, to be followed, let us hope, by a permanent peace economy. In the three months following the surrender of Japan the value of the industry rose to such an extent that its record for the 11 months of 1945 was \$2,051,399,000, as against \$1,636,196,000 for the same period in 1944. While difficulties are inevitable, there should be great reservoirs of employment quickly ready to serve the men returning to civil life. During the war great numbers of projects were postponed and others already under way were halted, while at the same time the normal growth and development of new projects was interrupted. Important features of this industry are its wide range of employment (unskilled, skilled, technical, and administrative), and the great volume and value of its work.

Recognition and approbation are due to the engineering and construction men in the armed forces for their astonishing work in preparing the way for advance movements, cooperating with the advance, and keeping supplies and communications up with the front. After which it was necessary to provide roads, bridges, airports, docks, water and sewerage facilities, barracks, camps, hospitals, and a hundred other services. The Army (Corps of Engineers), the Navy (Seabees) and the Marine Corps all shared in this work.

In the present transition period many restrictions and controls affecting and hampering the construction industry have been relaxed or removed. But to some extent their places have been taken by other unfavorable factors, such as labor unrest, price regulations, and shortages of men and materials. However, a number of public and private projects halted by the war are now being started or resumed.

One result of wage controversies has been uncertainty as to future wage scales, so that bids for contracts tended to rise as a means of insuring against future conditions. But this step has reacted in some cases by leading to the rejection of bids considered excessive. On the other hand, a number of contractors in New York city declined to bid on certain contracts imposing severe penalties for delays due to labor troubles. This led to modification of the objectionable terms.

In view of the widespread construction activities of various Government departments, the President in July signed a bill for coordination of the programs of these agencies. To provide agricultural and industrial development, and also a large field of employment, the Bureau of Reclamation (Department of the Interior) with its vast program of irrigation and power development, has presented to Congress an inventory of 415 new projects. The Corps of Engineers (U. S. Army) also has a large program of civil improvements planned. It was estimated in October that projects that could be put in hand at once represented \$833,538,200 for flood control and \$67,077,800 for river and harbor work, while by the spring of 1946 additional works would be ready for contract to the extent of \$450,571,165 for rivers and harbors and \$143,383,800 for flood control. These are but two examples of U. S. Government work.

A report of the American Society of Civil Engineers considers that there should be a \$15-billion plan for new construction ready for contract during the first postwar year; 66 percent for private works and 34 percent for public works. About half of

the private work would be commercial and industrial structures, the other half residential housing. But in July the Director of War Mobilization and Reconversion reported that plans then ready were insufficient for the amount of work necessary to provide employment. It has been stated that in this industry the preliminaries in advance of the blueprint stage consume 66 percent of the total time, while the actual construction takes only 34 percent.

Since the delay and dilatoriness in disposing of preliminaries for putting work under contract have become apparent, many projects must wait. Another cause of delay is that many local projects are held back while the authorities endeavor to obtain Federal financial aid. This short-sighted policy on matters which should be local responsibility led to a recommendation by a committee of Congress that Federal aid should not be provided for financing State or local public works at least for the first year of peace.

In figuring on prospective construction the U. S. Department of Commerce estimated that for the period June 30, 1945 to July, 1946, manufacturers had planned plant and equipment to cost \$4,500,000,000, while railroads and public utilities planned \$1,500,000,000 for expansion of facilities. But on the basis of actual definite projects, the estimate of *Engineering News-Record* was \$1,816,000,000 for factories and industries, \$344,000,000 for railroads, and \$700,000,000 for public utilities, a total of \$2,860,000,000. According to the Federal Works Agency (Office of Economic Research) the dollar volume of construction activity through the autumn of 1945 continued at \$425,000,000 per month, as increases in non-military work compensated for the decline in military work. The figures of the Federal Works Agency for the three years 1944, 1945, and 1946 are given in Table I.

TABLE I—CONSTRUCTION ACTIVITY IN THE UNITED STATES
(Federal Works Agency)
(Add 000,000)

	1944	1945	1946
	A	B	C
Total Millions	\$4002	\$4550	\$ 6750
Private	1575	2520	4825
Residential (non-farm)	499	715	1700
Non-residential structures	382	1070	2100
Industrial	234	600	1050
Commercial	62	275	725
Other non-residential, D	86	195	325
Farm	190	200	325
Utilities, E	504	535	700
Public	2427	2030	1925
Residential (non-farm)	192	70	125
Non-residential structures	879	855	375
Industrial	748	650	55
Other non-residential, D	131	205	320
Military establishments	720	580	125
Highways	353	270	725
Conservation and development	163	125	275
Sewerage and water	79	95	175
Other public	41	35	125
Federal	14	10	90
Non-federal	27	25	35

Column A—Revised figures for 1944.

Column B—Preliminary figures for 1945.

Column C—Estimated figures for 1946.

Note D—Includes educational, hospital, recreational, religious, and administrative structures.

Note E—Includes railroads, street railroads, gas, pipelines, electric light and power, telephone and telegraph.

Figures based on detailed statistics and long-continued records are given by the *Engineering News-Record* and presented in the following tables (II to V).

Estimates for the future are rather more hazardous than usual owing to the severe shortages of labor and materials. The above-mentioned paper

TABLE II—VALUE OF UNITED STATES
CONSTRUCTION
(*Engineering News-Record*)
(Add 000,000)

	1945	1946	1948
	<i>Esti- mated</i>	<i>Re- corded</i>	<i>Esti- mated</i>
Grand Total; all construction, public and private . . .	\$4200	\$3500	\$5500
Total engineering construction . .	3100	2289	3300
CLASSIFICATION OF ENGINEERING CONSTRUCTION			
Public buildings . . .	500	463	500
Industrial buildings . . .	400	635	600
Commercial buildings . . .	500	387	700
Highways and streets . . .	700	227	600
Earthwork and waterways . . .	250	57	200
Bridges, public and private . . .	150	53	100
Sewerage and treatment plants . .	125	35	100
Waterworks and treatment plants .	75	61	100
Unclassified, (airports, air bases, shipbuilding yards, etc. . .)	400	371	400
Total engineering construction . .	3100	2289	3300

TABLE III—PROGRESS OF CONSTRUCTION VALUES
(Add 000,000)

	Construction	
	Total	Civ Eng.
1944 Estimated . . .	\$3500	\$2750
1944 Actual . . .	2900	1700
1945 Estimated . . .	4200	3100
1945 Actual . . .	3500	2289*
1946 Estimated . . .	4900	3300

* Recorded

TABLE IV—ESTIMATED ANNUAL VALUE OF POST-WAR CONSTRUCTION
(*Engineering News-Record*)
(Add 000,000)

Water and sewerage . . .	\$ 400 to 600
Earthwork . . .	300 to 500
Highways and bridges . . .	1000 to 2000
Unclassified . . .	1500 to 2000
Mass housing . . .	2500 to 4000
Buildings, public, industrial and commercial .	3000 to 4000
Total civil engineering construction . . .	8700 to 13,100
Total all construction . . .	12,400 to 18,700

TABLE V—GEOGRAPHICAL DISTRIBUTION OF CONSTRUCTION VALUE
(*Engineering News-Record*)

	Per cent of Total	
	1945	Postwar
West of Mississippi . . .	22	20
Far West . . .	23	21
Middle Atlantic . . .	19	25
Middle West . . .	19	20
South . . .	13	10
New England . . .	4	4
Total . . .	100	100

had on hand in January detailed records of engineering construction projects totaling \$28,000,000. And out of this list a number of projects valued at \$500,000,000 had already advanced to the active status of contracts awarded. These records are considered to form tangible evidence that heavy construction can continue to expand at its fastest previous rate of 50 percent per year and still not exhaust this backlog of needed projects before 1950.

The question of manpower or labor supply is a serious factor. The war took away thousands of trained and experienced men, and these men must be made available as soon as possible while troops are being disbanded. At a conference of representatives of a score of organizations held at Washington in June, the principal objectives were: (1) to coordinate the rights and aids provided by the Federal Government and some State governments, with a view to furnishing the industry with trained men; (2) to help veterans interested in engineer-

ing and general construction to obtain additional technical education or training. There were at that time in the armed forces approximately a million men of this class engaged in combat or in military engineering work; 700,000 in the Corps of Engineers, U.S. Army, and 300,000 in the Seabees, U.S. Navy. Besides these there were thousands in other branches of the service.

Among all these are many who will wish to continue in engineering and construction work, and colleges and vocational schools are providing suitable studies and courses. There is the need for men for jobs, and the need of jobs for men returning from the war activities, together with a need for completion of interrupted training or for additional training to enable men to advance. Many skilled men were employed in non-skilled though necessary work while in the service. A factor that has slowed the program of getting men back to jobs has been the slow rate of discharge from the forces.

In view of the growing importance of this industry, the U.S. Department of Commerce in 1945 established a construction division having the following objectives: (1) promoting rapid expansion of the industry; (2) reaching a higher annual volume of work than in the postwar period; and (3) maintaining a more even annual volume of construction.

E. E. RUSSELL TRATMAN.

CONSUMERS' COOPERATIVES. Further acquisition of productive plant by central cooperative organizations, a continuation of the diversification process that has been under way for several years, a lively appreciation of the importance of educational work, and greater interest in the strengthening of international ties marked 1945 for the cooperative movement in the United States.

With the announced purpose of providing cooperatively in each locality as many goods and services as possible, cooperators made considerable progress in the commodity field and were showing unusual enthusiasm for new services such as cold-storage lockers, medical and hospital care, and housing. An "unprecedented" number of requests for assistance in organizing new associations was reported. Gains were noted in the expansion of cooperatives in the cities. Developments among the commercial federations were mainly in the direction of acquisition of new plant (especially productive plant); further strides were made in the production and refining of crude oil. Steps were also taken for strengthening the cooperative structure by greater coordination of activities, particularly at the national level.

Preliminary reports indicate increases in membership and business of both local (retail) and wholesale associations, and a determined drive for greater business efficiency. Cooperative leaders are painfully aware of the pitfalls inherent in the artificial prosperity of war economy and in the uncertainties of the postwar period, and are striving to avoid them by obtaining greater emphasis on sound financial, operational, and cooperative practice in all parts of the cooperative movement.

Definite gains were made in relations with other groups, notably with labor and church organizations, which are becoming aware of the advantages of cooperation and in numerous cases are actively fostering the organization of new associations.

The year was an extremely active one as regards legislation affecting cooperatives. Altogether, 44 legislatures met in regular or special session and many of them considered or passed measures concerning cooperatives or affecting them. In the latter

MEMBERSHIP AND BUSINESS OF CONSUMERS' COOPERATIVES IN 1944

(Local Associations)

Type of Association	Total Number of Associations (estimated)	Number of Members (estimated)	Amount of Business (estimated)
Retail distributive associations	4,285	1,524,500	\$557,000,000
Stores and buying clubs	2,810	690,000	280,000,000
Petroleum associations	1,423	810,000	270,000,000
Other distributive*	50	24,500	7,000,000
Service associations	577	318,500	11,055,000
Rooms and/or meals	175	18,000	2,600,000
Housing	59	2,100	1,575,000 ^b
Medical and/or hospital care			
On contract	50	95,000	1,300,000
Own facilities	18	45,000	2,100,000
Burial: ^c			
Complete funeral	36	35,000	275,000
Caskets only	4	1,400	5,000
Other ^d	235	122,000	3,200,000
Electricity associations ^e	850	1,149,700 ^f	60,960,000
Telephone associations ^g	5,000	330,000	5,485,000
Credit unions ^h	9,099	3,027,694	212,305,479
Insurance associations	2,000	10,510,000 ⁱ	190,000,000

Distributive, Service, and Productive Federations

Type of Federation	Number of Feder- ations	Member Associ- ations	Amount of Business			Value of Own Production	Net Earnings from All Departments	Patronage Refunds from All Departments
All types	53		\$178,166,000	\$11,652,800	\$3,707,800	\$65,255,200	\$8,221,700	\$7,994,800
Wholesales ^j								
Interregional	2	26	11,775,000			1,538,000	41,500	41,500
Regional	25	3,790	140,498,000	3,774,500	3,707,800	51,521,500	7,813,700	7,654,100
District	10	152	3,178,000	157,900		786,200	137,300	108,800
Service federations	21	1,500	7,820,000	7,720,400			98,200	79,900
Productive federations	12	150	14,895,000			11,409,500	131,000	110,500

* Such as dairies, creameries, bakeries, etc. ^b Gross income. ^c Local associations only, does not include associations of federated type (included with service federations) or funeral departments of store associations. ^d Such as cold-storage, water-supply, recreation, printing and publishing, etc., associations. ^e Almost all of these are REA associations, data for which were supplied by the Rural Electrification Administration. ^f Patrons. ^g Data are for 1936; no information on which to base later estimate. ^h Actual figures, not an estimate. ⁱ Policyholders. ^j Membership should not be totaled, as some local associations are members of several federations.

class were bills introduced or passed in a number of States, reserving solely to the medical profession the right to operate medical or hospital plans on a prepayment basis. Such laws would of course have the effect of preventing any further expansion of cooperative plans in these States, in this field. The attacks by private business, against the alleged evasion of taxes by cooperatives, and the hearings by a Congressional Committee which went into the matter of taxation touched off legislative maneuvers in a number of State legislatures and resulted in several resolutions directing a study of the tax status of cooperatives in the States. Reports will be made to the next session of the legislatures.

The cooperative movement has found itself increasingly, of late years, on the defensive against attempts to restrict its activities through the medium of legislation, and is generally coming to the conclusion that although it should not identify itself with political parties (remaining neutral in that respect), for its own survival it must concern itself actively with legislative matters.

FLORENCE E. PARKER.

CONTRACT SETTLEMENT. Office of. Contract terminations began early in the war production program, and the need to settle terminated war contracts soon became apparent. At first the contracting agencies of the Government, principally the War and Navy Departments, the Maritime Commission, the Treasury Department, and the Reconstruction Finance Corporation and its subsidiaries, developed their own procedures. However, the need for uniform methods soon made itself felt, and the Joint Contract Termination Board, under the Office of War Mobilization, was established by the principal contracting agencies. The basis of unified action to settle terminated contracts was elab-

orated in the *Report on War and Post-War Adjustment Policies* published by Bernard M. Baruch and John M. Hancock, who had been appointed as the Advisory Unit for War and Post-War Adjustment Policies of the Office of War Mobilization. This Report stressed the need for speed in the settlement of war contracts and for fairness to the contractor and to the Government. Subsequently action by various Congressional Committees led to the passage of the Contract Settlement Act.

The Contract Settlement Act of 1944, Public Law 395, 78th Congress, which became effective on July 21, 1944, established the Office of Contract Settlement as the policy-making agency to prescribe policies, principles, methods, procedures, and standards for the contracting agencies. Subject to the supervision of the Office of Contract Settlement, the contracting agencies are responsible for carrying out the Act's objectives. Except for appeals, all contract settlement operations are carried out by the contracting agencies.

Robert H. Hinckley, a Vice-President of the Sperry Corporation, New York, and former Assistant Secretary of Commerce for Air, was appointed Director of Contract Settlement and assumed his duties on July 28, 1944.

As a first step, the Director provided for the continuance of the work which the Joint Contract Termination Board had under way. As a second step, he established an organization to perform the duties prescribed by the Act. This organization reflected the direction of the Act to utilize "the personnel and facilities of the contracting agencies and other established Government agencies" to the maximum extent feasible.

In addition to the Contract Settlement Advisory Board and Appeal Board, the Office was organized in nine major units as follows: Terminations, plant

clearance, interim financing, training, progress and statistics, public information, accounting, organization and procedures, and general counsel. To provide for effective cooperation with the contracting agencies, a system of advisory committees of the Contract Settlement Advisory Board was set up. These standing committees parallel organizational units of the Office of Contract Settlement. Each committee is established by the Director, who names a chairman from his own staff and asks each agency on the Advisory Board to designate a member. In some cases agencies not on the Advisory Board are asked to designate representatives when they can contribute special knowledge. Commit-

increase in volume during the last quarter of 1945. In only a small percentage of cases did government agencies require more than 60 days to clear plants. Representatives of industry have expressed their satisfaction with the way in which the Government has handled contract settlement matters.

By the end of 1945, the contracting agencies had settled a substantial percentage of the number of terminated contracts. Work on a considerable portion of the remaining terminations was well underway. On Jan. 31, 1946, Robert H. Hinckley retired as Director of Contract Settlement. The President sent to the Senate the nomination of H.

STATUS OF CONTRACT SETTLEMENT
(All Terminations and Settlements; All Reporting Agencies)

	TERMINATED		SETTLED		PENDING	
	Number of Contracts (approximated to nearest thousand)	Cancelled Commitment Value (approximated to nearest billion)	Number of Contracts (approximated to nearest thousand)	Cancelled Commitment Value (approximated to nearest billion)	Number of Contracts (approximated to nearest thousand)	Cancelled Commitment Value (approximated to nearest billion)
Dec. 31, 1944 ..	128,000	\$25.5	117,000	\$13.9	11,000	\$11.6
April 30, 1945 ..	145,000	29.7	137,000	19.4	8,000	10.3
(V-E Day May 7) ..						
June 30, 1945 ..	165,000	37.0	149,000	22.4	15,000	14.7
July 31, 1945 ..	174,000	38.5	157,000	23.7	17,000	14.9
(V-J Day Aug. 14) ..						
Aug. 30, 1945 ..	271,000	60.9	165,000	24.7	106,000	36.2
Nov. 30, 1945 ..	301,000	63.5	234,000	28.7	67,000	34.8
Dec. 31, 1945 ..	303,000	63.9	250,000	30.4	53,000	33.5

tees may also be established for particular problems.

While there are 28 contracting agencies which may have war contracts subject to the Contract Settlement Act of 1944, the major burden of terminating and settling war contracts falls upon five of them: War and Navy Departments, the Maritime Commission, the Treasury, and the Reconstruction Finance Corporation and its subsidiaries. Subject to this supervision, the contracting agencies are likewise responsible for carrying out the Act's objectives.

Progress in 1945. The Office of Contract Settlement has issued 20 regulations dealing with such matters as interim financing, plant clearance, pretermination agreements, standard settlement proposal forms, retention of records, accounting practices and other subjects. The issuance of these regulations as provided for by the legislation has facilitated the prompt settlement of terminated war contracts.

The Appeal Board of the Office of Contract Settlement was established, and Regulation 15 was issued, embodying rules of practice and procedure. Robert S. Stevens, Dean of Cornell University Law school, on leave, was appointed Chairman of the Appeal Board. Up to Dec. 1, 1945, 31 cases had been filed with the Board. Decisions have been handed down in 13 and 6 have been withdrawn. Edward J. Dimock of New York succeeded Dean Stevens on Oct. 1, 1945, as Chairman.

The reconversion of industry from war to peace has not been hampered either by lack of adequate financing on terminated contracts or by failure of the Government to clear contractors' plants of unwanted materials. The partial payment and guaranteed loan (T-Loan) program has proved more than adequate to finance industry in transition. In addition, business could also avail itself of some types of production loans which could be shifted to finance terminations. Plant clearance both of termination inventories and of government-owned equipment proceeded smoothly in spite of a great

Chapman Rose, Deputy Director, to be his successor.

The appended table gives the status of contract settlement as of Dec. 31, 1945.

H. CHAPMAN ROSE.

COPPER. Ending of heavy war needs for copper found the world as a whole with mines developed to produce far more copper than apparently would be needed in peacetime. The United States, however, faced declining production that might force it, within a decade, to import a portion of its normal needs.

Mine production of copper in the United States in 1945 was 774,562 net tons (1944, 837,089 net tons; 1943, 938,727 net tons). Shortage of manpower, aggravated by withdrawals by the armed services, proved the greatest difficulty in maintaining output. As in previous years, Arizona, with a number of both open pit and underground mines, led in production. Utah, nearly all of whose production came from the mammoth open pit mine of Utah Copper Co. in Bingham Canyon, was second, and Montana, producing 95 per cent of her tonnage from the Anaconda Copper Co. properties at Butte, was third. Nevada, New Mexico, and Michigan produced important tonnages, although three Michigan mines halted production in the fall when special prices were cancelled.

Copper refineries in 1945 produced about 1,100,500 tons of metal from both foreign and domestic ores (1944, 1,221,187; 1943, 1,379,263). With the end of the war imports of foreign ore dropped off rapidly, contributing, along with manpower shortages throughout the year, to the lower production figure.

Imports of refined copper were about 530,000 tons during the year, establishing a new high. Chile supplied about 75 per cent, with substantial amounts from Canada, Belgian Congo, and Rhodesia. About 330,000 tons additional were imported in the form of concentrates and blister copper, principally from these countries and Mexico.

Consumption shadowed Allied military fortunes closely. In the early part of 1945, the brass mill industry (brass is about 70 per cent copper) groaned to fill needs of a sharply increased ammunition program following military reverses in Belgium late in 1944. In March, brass mill production hit an all-time monthly peak of 517,539,000 lb. compared to a prewar average of about 100,000,000 lb. As the European war drew to a close, the output dropped rapidly, and in August 175,725,000 lb. was being produced. With the Japanese surrender, production levelled off at about 150,000,000 lb., with prospect of continued production at this level to meet reconversion demands. Total consumption of new copper for 1945 was 1,471,700 tons, according to the Civilian Production Administration.

The drop in military requirements was so sharp after the end of the European war that the War Production Board almost immediately revoked most restrictions on the use of copper, which had been tightened in March. Before the end of May, most delivery controls on brass mill products were revoked. The master copper control order, M-9, was withdrawn August 21.

Future difficulties of domestic mines in meeting peacetime needs were foreshadowed by the fact that their 1945 production was about half the amount of new consumed in the United States in each of the war years and barely enough to meet consuming demands in most years of the late 'thirties. Under the government's premium price plan the mines continued to be paid a premium for mining ores which it would be unprofitable to mine at the ceiling price of 12 cents per lb. Thus, for 1945, the average price paid for copper mined in the United States was 13.6 cents per lb. The premium price plan is scheduled to end June 30, 1946. Elmer W. Pehrson, chief, economics and statistics branch, United States Bureau of Mines, places United States commercial copper reserves at 34 years on the basis of the 1935-39 annual rate of use.

During the war, copper mining activity all over the world was greatly increased, and most foreign producers now are faced with a heavy surplus. Reconstruction Finance Corp., buying for the U.S. Government, re-established its foreign purchase program, which had been discontinued in October, 1945, on Jan. 30, 1946. The agency will buy 120,000 tons during the first six months of 1946, probably most of it from Chile. The British Empire, whose prewar copper resources roughly balanced its requirements, now finds itself over-supplied with heavy Rhodesian production plus a probable 150,000 tons a year from Canada. More than half of Canada's output is a by-product of the Sudbury, Ont., nickel mines, the world's largest. The Belgian Congo is able to mine sufficient copper to supply the European market almost single-handed.

Stocks of refined copper held by the government through the Reconstruction Finance Corp., totalled 493,998 tons on Nov. 30, dropping about 4,408 tons from the preceding month due to releases to industry. Much of this metal will be placed in a permanent defense stockpile if pending legislation is passed.

CHARLES T. POST.

COPYRIGHT. Registrations for the fiscal year 1944-1945, according to the report of the U.S. Register of Copyrights, numbered 178,848, as compared with 169,269 for the preceding year. Of these 40,544 were classed as books, but included pam-

phlets, leaflets, and contributions in periodicals. Those printed in the United States numbered 39,754, those printed abroad in a foreign language, 111, while the remainder, 679, were English books registered for ad interim copyright. The chief classes of the remaining registration were: Periodicals (numbers) 45,763; musical compositions, 57,835; dramatic or dramatico-musical compositions, 4,194; works of art, models, or designs, 1,821; drawings or plastic works of a scientific or technical character, 1,554; photographs, 1,258; prints and pictorial illustrations, 2,634; maps, 857; lectures, sermons, addresses, 1,177; motion-pictures not photoplays, 1,120; motion-picture photoplays, 615; reproductions of works of art, 186; commercial prints and labels, 7,403. The renewals numbered 11,367 as compared with 10,203 in the preceding year. The fees applied during the year amounted to \$338,812. The total number of separate articles deposited during the fiscal year ended June 30, 1945, was 272,092. The gross receipts of the Register's office for the fiscal year were \$367,312.04, the total expenditures for salaries, \$316,870, and for supplies, \$1,423.

CORSICA. A French island department in the western Mediterranean, 100 miles southeast of Nice. Area, 3,367 square miles. Population (1936), 322,854. Chief towns: Ajaccio (capital) 38,000 inhabitants; Bastia, 52,208.

COSTA RICA. A republic of Central America. Area: 19,238 square miles. Population: 725,149 (official estimate, December 1944). Capital: San José.

Costa Rica has low tropical coastal plains and a mountainous interior. The Meseta Central, a highland plateau of 3,000 to 4,000 feet elevation, enjoys a temperate climate and is the center of the country's population and industry.

Government. Under the Constitution of 1871, Costa Rica is a centralized republic of 7 Provinces. It has a unicameral legislature of 45 members, elected for 4-year terms, one-half being elected every two years. The President is elected for a 4-year term, and is assisted by a Cabinet of 9 ministers. President Teodoro Picado Michalski was elected on Feb. 13, 1944, and assumed office on May 8, 1944.

The People. According to the census of 1927, about 80 percent of the people of Costa Rica are of almost pure Spanish descent; 14 percent mestizo; 4 percent Negro, and 2 percent Indian. Seventy-five percent live in the Meseta Central. The largest cities are: San José, 75,000; Heredia, 10,000; and Alejuela, 10,000.

Spanish is the official language, but English is taught in schools throughout the country and is spoken widely in the eastern lowlands. Roman Catholicism is the state religion.

It is estimated that 82 percent of the total population is literate. In 1941 there were 761 primary schools with a total enrollment of 73,217; 49 secondary schools with a total of 7,251 students; and the National University of Costa Rica had a student body of 820. Primary education is compulsory. Under the school law of 1945, matriculation and tuition in the Government's secondary schools is to be free to all students whose parents or guardians own no other property than the house in which they live.

National Economy. Agriculture and agricultural processing are the leading occupations of Costa Rica. Coffee, bananas, and cacao are the most important crops. There are also small lumber and pastoral industries. Total production of green coffee

beans during the 1943-44 crop year amounted to 370,575 bags of 60 kilograms. Normally Costa Rica produces between 100,000 and 120,000 bags (150 pounds net) of cacao annually, and exports about 80 percent. Banana cultivation is one of the main industries of the country; practically all of this crop is exported to the U. S.

Manufacturing in Costa Rica includes plants for coffee-cleaning and for grinding coffee and cacao, rice mills, sawmills, sugar mills, shoe factories, extraction of edible oil, cotton textiles, and handicraft.

Foreign Trade. In proportion to its population Costa Rica has a larger foreign trade than any other Central American country except Panama. In 1944 exports totalled \$10,528,374. Exports of coffee during the 1943-44 quota year totaled 308,747 bags, valued at \$6,296,579. Banana exports in 1944 totaled 1,879,000 stems, valued at \$1,774,754. Coffee exports accounted for about 60 percent and banana exports for about 17 percent of the total exports. Because of severe storms, Costa Rica's export of cacao in 1944 fell to 9,220,795 pounds, valued at \$836,564, as compared with 12,224,842 pounds, valued at \$1,110,306 in 1943. More than half of the cacao exports in 1944 went to Colombia, with Mexico ranking second as a market. The U. S. took about 9 percent. Costa Rica exported gold bars in 1944 valued at \$96,956, and gold ore concentrates valued at \$21,242. Other exports were: fruit, vegetables, honey, hides, and skins.

In 1942 Costa Rica's imports totaled \$12,287,000, consisting chiefly of manufactured products and foodstuffs. The U. S. supplied 73 percent; Mexico 7 percent; and 3 percent from Argentina, the United Kingdom, and Panama.

Events, 1945. The year opened tumultuously in Costa Rica. On the last night of the old year, three persons had been wounded when an armed group of alleged followers of former President León Cortés Castro fired on the home of President Teodoro Picado, and an armed assault on the home of Manuel Mora, head of the Popular Vanguard (formerly Communist) Party, resulted in the beating of his mother and sister. Police also reported several oppositionist demonstrations in San José.

Many paraders were injured in a clash with police during a New Year's Day demonstration for Cortés; and the President charged that the attack on his home had been provoked by Cortesistas, whose probable plan to overthrow the Government had been frustrated. One person was killed and several wounded in clashes between oppositionists and supporters of the Government on New Year's night. Cortés denied that he or members of his party were plotting a revolt, and rejected any responsibility for the attack on the President's home. His party, he said, was maintaining "peaceful opposition against the Government."

The opposition charged that the trouble had started when "Communist shock brigades" attacked followers of Cortés Castro, while the Communists replied that workers had only "answered the aggression of Cortesistas."

A few days later a break between the Government and the Popular Vanguard Party was threatened, when War Minister Rene Picado, brother of the President and reportedly opposed to the pact with the leftists, discharged 50 alleged Communist policemen because of their part in the New Year's disturbances. The crisis was eased when the President and his entire Cabinet reaffirmed their loyalty to the pact between their supporters and the Popular Vanguard.

The War Minister resigned on Jan. 15, and the President himself took over the office. The President

refused to accept the resignation of Agriculture Minister José Joaquín Peralta. The Foreign Minister denied that the Mexican Ambassador had intervened in the crisis, as some of the press charged.

Congress approved a resolution on Mar. 22 requesting suspension of relations with Spain, and Congressional president José Albertazzi Avendano declared that body would do its utmost to force a rupture with Franco. *Diario de Costa Rica* charged on Apr. 4 that provocation of such a rupture was behind a "serious incident" which had occurred when police entered the property of the Spanish legation to obtain the personal belongings of expelled German nationals whose property had been in Spanish custody for two years. Later that month President Picado sent a message of congratulation to anti-Franco Spaniards on the fourteenth anniversary of the Spanish republic. But on Sept. 12 the Foreign Minister asserted that Costa Rica would not break relations with Spain; it would follow the lead of the United States, the United Kingdom, and the Soviet Union.

On Apr. 24 the Government of Panama declared Costa Rican Ambassador Enrique Fonseca Zuñiga *persona non grata* because he gave asylum to refugee Panamanian Deputy Simón Vega. Fonseca Zuñiga said that everything he had done was with the knowledge and consent of his Government.

Officials announced on Apr. 29 that Cocos Island had been leased to the U. S. Inter-American Affairs Food Production Division for land cultivation and cattle raising.

Former President Cortés Castro returned to the political scene on June 11 when he said that he was unwilling to participate in 1946 congressional elections, and that he would not be a presidential candidate in 1948 because he had "no confidence in free election promises given by the Picado regime."

On June 19 a threatened break between Picado and organized labor was averted when the President promised to avoid delays in payment of government workers and to give special care to the needs of laborers.

The following day the U. S. State Department announced that President Truman had accepted "with great appreciation" a gift of land from the Costa Rican Government for construction of a U. S. embassy.

The left-right conflict broke out again early in August when the opposition press attacked Mexican Ambassador Roberto Córdova, charging that he had intervened in internal politics of Costa Rica. A group of leftists serenaded the ambassador to show their disapproval of the attacks.

The Government was notified that on Sept. 24 United States forces would be withdrawn from a base near San José and that forces and materials would be removed to the Canal Zone.

A proposal to reestablish a public instead of secret ballot was defeated in Congress by 23 votes to 22 on Oct. 3.

The Government on Dec. 27 seized the Northern Railway Company, whose operations between Puerto Limón and San José had been paralyzed by a strike since Dec. 22. The strike, for wage increases, was declared illegal, after workers rejected a compromise solution proposed by Labor Minister Miguel Brenes Gutiérrez.

HARRY B. MURKLAND.

COURT GAMES. Indoor court games enjoyed a slight revival in 1945. Matches for the Lapham Trophy, held annually between American and Canadian teams since 1922, again featured the squash racquets season and the U. S. retained honors in

the event. A new international competition made its debut when Alastair Grant of Montreal presented a trophy for an annual doubles meeting between American and Canadian teams. Laurels in this first tournament also went to U.S. players.

An old court tennis fixture, the Payne Whitney Memorial tourney, was held for the first time since 1940 and the team play was won by Long Island, which triumphed over New York and Boston. Lt. Comdr. Ogden Phipps, Jock Whitney, J. Nelson Pell and James Knott won for Long Island in the final round. Only other court tennis play of note was the Red Cross benefit tournament in which Pierre Etchebaster, world open champion, paired with Lt. Comdr. Robert Gerry, Jr. to defeat Phipps and Lt. Comdr. Robert Grant 3d.

Squash tennis was confined largely to club tourneys and a few benefit matches. H. J. Rose of the Princeton Club kept the national veterans' championship and F. R. Hanson of the Columbia Club captured the National Association's Fall scratch competition. Stanley Pearson, Jr. of the Philadelphia Cricket Club was victor in the annual invitation play at Montreal.

THOMAS V. HANEY.

CRANBROOK FOUNDATION. A foundation in Bloomfield Hills, Mich., established in 1927 for the purpose of adding to and strengthening educational and cultural facilities within the State of Michigan. It is developing a cultural center at Bloomfield Hills in which are included Brookside School Cranbrook, a day school for children from kindergarten through the sixth grade, Cranbrook School and Kingswood School Cranbrook, boarding and day preparatory schools for boys and girls respectively, Cranbrook Academy of Art, Cranbrook Institute of Science and Christ Church Cranbrook. Expenditures for the year ended June 30, 1945, were \$195,144.95; capital assets on that date, \$6,486,020.04. Chairman of the Board of Trustees: George G. Booth.

CRETE. A mountainous island in the eastern Mediterranean, forming the most southerly part of Greece. Crete was occupied by German armed forces during May, 1941, and was recaptured by Allied armed forces in 1945. It is 160 miles long and from 6 to 35 miles wide. Area, 3,235 square miles. Population, 441,687 on Jan. 1, 1939. Chief towns: Canea, the capital, 26,604 inhabitants; Candia, 33,404; Rethymnon, 8,632. There are good harbors along the northern shore, particularly at Suda Bay, but the south shore has no satisfactory ports.

CROSS-COUNTRY RUNNING. Charles Robbins, Jr., Navy Pharmacist Mate from Brunswick, Me., again was the most consistent scorer in A.A.U. distance events. The New England champion captured national titles at 20, 25 and 30 kilometers, repeated his victory of 1944 in the U. S. Marathon, and placed second in the cross-country test, which was won by Tom Quinn, New York A.C.

In pacing the N.Y.A.C. to team honors in the hill-and-dale grind at Buffalo, Quinn toured a treacherous snow and ice-covered course in 34:14 to set a new record for the Delaware Park layout of 10,000 meters. Only the week before, Quinn had carried off the metropolitan senior A.A.U. senior crown in leading his Winged Foot mates to the team championship for that event.

The traditional Boston Marathon was won by Johnny Kelly of Acton, Mass., who also captured the New England honors at 25 kilometers.

John T. Hanley of Dartmouth won titles in the I.C.A.A.A. and Heptagonal harrier tests, with the team laurels in both going to Army. Fred Feiler and his Drake University mates successfully defended their titles in the National Collegiate run. Victor Twomey of Illinois and the Wisconsin University team scored triumphs in the Western Conference championships, while New York University and its ace Alex Jordan won in the Metropolitan intercollegiate run.

THOMAS V. HANEY.

CUBA. An island republic of the West Indies. Area: 44,217 square miles. Population: 4,778,583 (1943) Capital: Havana.

About one-fourth of the island is mountainous; the remainder is composed of lowlands, terraces, and gentle slopes. There are no extremes of temperature and little variation between summer and winter. The rainy season is from May to November.

Government. Cuba, under the Constitution of 1940, is a centralized republic of 6 provinces. It has a bi-cameral Congress: a Senate of 54 members, and a House of Representatives of 114. The Congress convenes twice a year, in March and September, for not less than 60 days. The president is elected for a 4-year term and is aided by a Cabinet of 17 ministers, 4 without portfolio. Dr. Ramón Grau San Martín was elected President on June 1, 1944.

The People. Sixty-five per cent of Cuba's population belong to the white race; Negroes, mestizos, and other races compose the remainder. Density of population ranges from 48 persons per square mile in the Province of Camaguey to 389 in the Province of La Habana. The largest cities are: Havana, 676,376; Marianao, 114,743; and Santiago de Cuba, 120,577.

Spanish is the official language of Cuba. The predominant religion is Roman Catholic.

It is estimated that from 60 to 70 per cent of the population over 10 years of age is literate. In 1941 there were 5,982 primary schools teaching a total of 537,756 children; 168 secondary schools had a total enrollment of 27,423 in 1938-39. The University of Havana had 13,940 students in 1941.

National Economy. Cuban economy is dependent on sugar and tobacco. More than half of the persons gainfully employed are engaged in agriculture, and of these, 70 per cent work in the sugar industry. The 1944 sugar crop amounted to 5,646,337 short tons; most of it was exported to the United States, including about 16 per cent in the form of invert molasses. Tobacco is Cuba's second crop in export importance. The 1944 crop of 65,700,000 pounds was the largest since 1931, and over 50 per cent larger than the 1943 crop. Other important Cuban crops include corn, grown chiefly for domestic consumption; pineapples, bananas, and henequen, which are exported.

Cuba's most important manufacture is the production of sugar from cane. Tobacco manufactures are also important, and other products include: rope and cordage, shoes, cement, paint, and agricultural tools and implements.

Foreign Trade. Cuba's foreign trade totaled \$635,707,000 in 1944, over 20 per cent more than the total for 1943. Exports were valued at \$427,058,296, an increase of 21.8 per cent over 1943. Of total exports in 1944, the United States took 88.9 per cent, valued at \$379,974,712, an increase of about 28.5 per cent compared with the value in 1943. Cuban exports to Europe were valued at \$34,858,192, 6 per cent less than in 1943. Exports of sugar and other cane products in 1944 were valued at

\$296,750,000. The value of tobacco exports reached an all-time high of \$51,700,000 in 1944.

Cuban imports in 1944 reached a total value of \$208,648,000, the highest since 1929, exceeding the 1943 figure by 17.6 per cent. Of the total, the United States supplied 80.9 per cent, valued at \$168,840,864, an increase of 21.9 per cent over 1943. Imports from Europe were valued at \$6,027,430; imports from Asia, \$5,658,967. Cuba's chief imports are: foodstuffs, textiles, manufactured products, machinery and other equipment.

Events. The opening of the year found Cuban politics disturbed. Members of President Ramón Grau San Martín's own Auténtico Party and supporting groups were openly dissatisfied with the distribution of patronage and with Grau's alleged failure to appoint technically qualified Ministers. Further disorganization was caused by mass dismissals of government employees and by the inability of the Government to deal with shortages of such basic food items as milk, eggs, bread and butter.

The President did win an advantage on February 25, however, when the Popular Socialist (formerly Communist) party agreed to support his policies. This gave his Government a majority in the evenly divided Senate. The party later defined its position as not part of the Government but not part of the opposition either.

Eugenio Llanillo García, personal lawyer and friend of former President Batista, was kidnapped and shot to death on the night of March 14. During the following night and the early morning of March 16, army and police forces suppressed an attempted armed rebellion against the Grau Administration by arresting about 80 former army and police officers and civilians who had been connected with the Batista Administration. They were said to be led by former army chief José Eleuterio Pedraza. No shots were fired and Havana remained calm as the roundup was made. The plot was believed to have its origin in the dismissal of about 1,500 army, police and civilian officials of the Batista regime by Grau after he took office. Grau blamed the attempt on "capitalists" who had had business dealings with the Batista Administration, implied that members of Congress were also implicated, and said: "I have no positive proof of his (Batista's) participation, but neither do I have any that he is not involved." Opposition leaders and Batista, in San Francisco, denied the charges.

President Grau asked immediate reform of the tax system, establishment of a national bank of issue, and approval of other laws to put the 1940 constitution into effect, as the second legislative period of the 20th Congress opened on March 19.

The trial of Pedraza and 40 other alleged participants in the plot against the Government opened on March 27. A number of the defendants were released for lack of evidence. Pedraza and five others were convicted and were sentenced to one year's imprisonment. Enrique Enriquez, Chief of Government Palace Secret Service and a prominent government witness in the trial, was machine-gunned to death from a speeding auto on April 24.

But for most Cubans, the trial was overshadowed by the severe food and other shortages which gripped the country. Riots broke out in Havana as crowds stormed grocery stores where soap was on sale for the first time in many days. Milk and butter were not to be found. Lard, oil, beans, rice and eggs grew scarce. Prices of domestic vegetables rose steadily.

A dispute broke out between Cuba and Ecuador

on April 11 over a deal completed in January whereby Cuba agreed to purchase 15,000,000 pounds of Ecuadorian rice at \$8 per hundred pounds, and to sell Ecuador 25,000,000 pounds of sugar at \$3.25 per hundred pounds. On April 11 Cuban Commerce Minister Alberto Inocente Álvarez charged in Senate hearings that the Ecuadorian Government was speculating in rice and was not fulfilling the contract. Ecuador denied the charge. The incident ended on April 23 when the Ecuadorian Minister to Cuba announced that Cuba would receive 10,000,000 more pounds of rice.

Three days later long-drawn-out negotiations ended in the signing of three contracts between the Cuban Government and the United States Commodity Credit Corporation, providing for sale of most of Cuba's 1944-45 sugar crop to the United States for 3.10 cents per pound f. o. b. Cuban ports. The price was less than the Cubans wanted but more than the 3 cents offered originally. Molasses and industrial alcohol were also covered in the contracts. The 1945 grinding season closed on June 13 with output 30 percent below that of 1944.

The island's meat supply was practically exhausted by June 5, according to local radios. The Government put into effect a new direct producer-to-consumer distribution program. Riots broke out when angry consumers clashed with a parade of butchers who were protesting the new regulations; one person was killed, several injured, and eight arrested.

A diplomatic incident with Spain developed on July 28 when a Spanish ship carrying the new Minister to the United States, Manuel Aznar, docked in Havana. The envoy did not leave the vessel, reportedly on the advice of the Cuban Government, and police dispersed a crowd at the waterfront which distributed handbills accusing him of spreading fascist propaganda. But some 1,000 students carrying banners inscribed "Death to Franco," stoned the Spanish Embassy, ripped down the Spanish flag, and damaged property. The Spanish Government made a formal protest.

A barter agreement to exchange 1,500 tons of Cuban sugar for 800 tons of Uruguayan jerked beef was signed on September 14.

President Grau began his second year in office on October 10 with a major Cabinet crisis on his hands. Foreign Minister Gustavo Cuervo Rubio and Commerce Minister Alberto Inocente Álvarez, both Republicans, had presented their resignations. Álvarez was charged with mishandling barter of Cuban sugar for Argentine, Ecuadorian, Mexican and Uruguayan products. Prime Minister Félix Lancia also quit. On October 13, Grau appointed Senator Carlos Prio Socarras, a youthful leader of his own Auténtico Party, as Prime Minister, elevated Under Secretary of Commerce Cesar Casa to the minister's job, and named Álvarez Foreign Minister. The latter appointment was called a slap in the face of the opposition-controlled House of Representatives, whose vote of no confidence had forced Álvarez out of the Commerce Ministry.

With leaders of all six political parties favoring the move, the Senate on October 15 unanimously approved a motion recommending the rupture of diplomatic relations with Spain and recognition of the Spanish republican Government-in-exile. The House of Representatives concurred unanimously on the following day.

Negotiations for sale of the 1945-1946 sugar crop opened in Washington on October 17. The

United States offered the highest price since the war started: 3.675 cents, as compared with 3.10 cents paid for the last two crops. The Cubans, however, fearful of postwar competition from other areas, wanted a three to five year contract, while the United States negotiators insisted they had no legal right to deal for more than one crop. The talks were deadlocked for the rest of the year.

Col. Antonio Brito, former Chief of National Police, was assassinated in a Havana suburb on November 28 by an unknown assailant who fired from a passing automobile.

The year ended as it had begun, on a note of confusion and crisis for the hard-pressed Government of President Grau. On December 10, officials announced the arrest of Eugenio Menéndez, aide to former President Batista and a lieutenant in the National Police force, and three of his employes, after the discovery of a cache of arms and equipment on Menéndez's ranch, 70 miles west of Havana.

On the same day, heavily armed police threw a cordon around the Ministry of Education, after they had failed to evict 30 high school students who had barricaded themselves in the building because, they said, Education Minister Diego Vicente Tejera had denied them audience when they tried to see him to protest against "inefficiency" and unqualified instructors.

And on December 11 the President accepted the resignation of Senate President Eduardo Suarez Rivas and his assistant, who had been under fire from the united opposition Senators of the Liberal, Republican and ABC Parties. Suárez Rivas and his vice president were replaced by an Auténtico and a Communist, respectively. These were the only two parties now supporting Grau. Communist support of the Administration gave it an acting majority in the Senate, although the opposition still controlled the House of Representatives.

HARRY B. MURKLAND.

CUSTOMS, Bureau of. Customs activities continued, during the sixth year of the war, to be determined as much by the exigencies of the prolonged conflict as by consumptive and commercial considerations. Not only did all the special responsibilities delegated to customs officers as a part of the national defense program continue in effect, but the very nature of the regular customs functions was colored and limited by war aims and war operations. The kind of goods imported, the sources from which they were secured, and the vessels and vehicles in which they were transported all yielded to the pressure of war needs.

Customs Collections. From a high of \$727,251,316 in 1944, total collections by customs officers receded to \$561,101,058 in 1945. Of these amounts, \$434,259,038 in the earlier and \$358,138,757 in the latter year consisted of actual customs collections, while \$292,992,278 and \$202,962,301, in these respective years, was collected for other agencies, chiefly as internal-revenue taxes on imported liquors and wines.

Customs collections, during July and August, 1944, continued the downward trend which prevailed during the last three months of the preceding fiscal year, shrinking from \$42,998,953 in March to \$23,407,658 five months later. During the remainder of the year, however, collections increased steadily and almost continuously to \$36,126,921 in May, the only interruption in the upward trend being in the short month of February.

Wool and wool manufactures have been the chief source of customs revenue during each of the past five years, duties on such imports representing 30.8 percent of the total duties in 1944, and 35.1 percent in 1945, despite a decline during the latter year. Duties on imports of spirits, wines, and other beverages ranked second in importance in both years, amounting to \$99,712,606 in 1944 and \$55,316,286 in 1945. Customs revenue from this source in 1944 reached the highest point in customs history due to the diversion of domestic alcohol from the manufacture of liquor to war purposes which caused imports to rise to an unprecedented level. Even with reduction in liquor imports in 1945, which caused a 44.5 percent decrease in duties on alcoholic beverages, collections from this source were higher than in any year before 1944. Duties on sugar, which prior to the past year, were among the important sources of customs revenue, yielded a comparatively small amount of duties in 1945, due to the admission, duty free under the terms of Executive Order 9177, of most of the sugar brought from Cuba and other countries. The decline in revenue from the commodities included in these three tariff schedules more than accounted for the entire decrease in customs receipts in 1945.

Dislocations in trade resulting from the war continued to be manifested in the territorial sources of customs revenue. Duties on European goods amounted to only 17.4 percent of the total duties collected in 1945, compared with 47.6 percent in 1939, the last year before the war. Furthermore, 98.1 percent of the European total was collected on duties from Switzerland, Portugal, Spain, and the United Kingdom, which in 1939 were responsible for only 35.9 percent of the European total. Duties on Asiatic imports, although slightly larger than in 1944, were also much smaller than in the previous years. Duties on goods from Cuba also fell to a new low with the admission of a great deal of sugar duty free, and with reduced imports of alcoholic beverages. Duties on Canadian imports, on the other hand, were the largest recorded in recent years and those on goods from South America were exceeded only in 1942. Duties on imports from Oceania and Africa, while slightly less than in the war years immediately preceding 1945, remained at levels far above those reached prior to the war.

Volume of Business. Entries of merchandise were slightly more numerous and border traffic much heavier than during the previous year, indicative of a trend toward more normal conditions in trade and commerce. The moderating of wartime restrictions on tourist travel accounted both for large increases in the number of baggage and informal entries and for the greatly increased number of persons entering the United States by vessel and vehicle. Airplane travel on international lines showed particularly heavy gains, the number of aircraft arriving in the United States being almost double and the number of passengers arriving by air more than double that of the previous year.

Law Enforcement. As a part of the enforcement of customs laws a considerably larger number of seizures were made than during any year since the repeal of the 18th amendment. This increase was due in part to increased tourist traffic, in part to military and naval personnel returning from overseas, and in part to a shortage of certain materials, such as cigarettes, in this country. The value of guns and ammunition seized during 1945 was more than 12 times that of 1944 and the value of tobacco products seized almost sixfold greater. Liquor seizures, on the other hand, declined sharply, both

in number and in value, as domestically produced spirits became easier to obtain. Narcotic seizures by customs officers along the border were of minor consequence in both years.

W. R. JOHNSON.

CZECHOSLOVAKIA. A republic in central Europe which was under German control from March, 1939, until its liberation by Allied armed forces in 1945 (see EVENTS below). Area: 49,373 square miles (excluding Ruthenia ceded by treaty to the U.S.S.R. in 1945). Population (1930 census): 14,000,000 (excluding those in Ruthenia). Capital: Praha (Prague), 962,200 inhabitants (1937). Other important cities: Brno (Brünn), 291,800 (1937); Moravská Ostrava, 178,099 (1935); Bratislava (Pressburg), 170,668; Plzeň (Pilsen), 124,353 (1935). See YEAR BOOK for 1939 for prewar statistics relating to Czechoslovakia. Statistics relating to Czechoslovakia during the war years may be found in the League of Nations *Monthly Bulletin of Statistics*, October, 1945 (Geneva Edition) and *Statistical Year-Book of the League of Nations*, 1942/44.

Events, 1945. To the ancient lands of the West-ernmost Slavs was reserved the doleful honor in 1945 of being the last of the territories overrun by the Hitlerite hordes to be delivered from Nazi oppression. Here the broken Wehrmacht made its final stand and suffered its ultimate defeat. Here, under the aegis of Soviet Muscovy and the guidance of the returned government-in-exile, Czechs and Slovaks belatedly undertook the tasks of reconstruction within a Republic reduced in size by the loss of Ruthenia but enhanced in inner unity by the stern expulsion of Teutonic and Magyar minorities. By year's end the new Czechoslovakia had emerged from its seven years' nightmare of enslavement and made a brave beginning toward a new era of freedom and peace.

Homeward Via Moscow. Early in the year the government-in-exile continued in London the preparations initiated in 1944 for returning to the homeland in the wake of the Red Army. Following the example of the USSR, President Benes and his Cabinet granted diplomatic recognition on January 31 to the Polish Provisional Government. Plans were made to proceed to Kosice in Slovakia where a new coalition Cabinet would be named. In his farewell reception to newsmen on February 21, Dr. Benes expressed his resolve that the Sudeten Germans must leave Czechoslovakia. On the 25th Churchill and Eden extended good wishes and *bon voyage* to Benes and Foreign Minister Jan Masaryk.

March found Benes, Masaryk, Prime Minister Jan Sramek and other leaders in the Soviet capital, where they conferred with Stalin, Kalinin, Molotov and representatives of liberated districts and the underground. Decisions were reached for the establishment of a new regime and for the cooperation of Czechoslovak troops against the enemy. On April 6, less than a week before his death, President Roosevelt sent a congratulatory message to Benes:

I know what joy your homecoming must mean both to you and to every other patriotic Czechoslovak because it marks the restoration of your country to the dignity of independence and freedom from foreign oppression. Your homecoming also symbolizes to all Americans the turning of the whole world from the years of conquest and strife to an era of justice and cooperation in a community of free nations dedicated to those same principles of democratic integrity which are so characteristic of Czechoslovakia itself.

The new Provisional Government at Kosice, organized on April 6, at once declared that "in matters of punishing Germany, in settling Ger-

many's reparations obligations, in setting new frontiers and in organizing future peace, Czechoslovakia will stand as near as possible at the side of the Soviet Union and in one row with the other Slav and all democratic countries." The Cabinet was headed by Col. Zdenek Fierlinger, formerly Ambassador in Moscow. Jan Masaryk remained Foreign Minister and represented the Republic at the San Francisco Conference. The Ministry of the Interior went to a Communist leader. The list of Ministers was as follows:

Premier—Col. Zdenek Fierlinger.
Vice Premiers—Josef David, Klement Gottwald, Vilem Siroky, Jan Sramek, Jan Ursiny
Foreign Affairs—Jan Masaryk.
National Defense—Gen. Ludvik Svoboda.
Interior—Vaclav Nosek.
Foreign Trade—Hubert Ripka.
Finance—Vavro Srohar.
Education and Popular Enlightenment—Prof. Zdenek Nejedly.
Justice—Jaroslav Stransky.
Information—Vaclav Kopecky.
Agriculture—Julius Duris.
Industry—Bohumil Lauschnan.
Internal Trade—Ivan Pietr.
Communications—Gen. Antonin Hasal Nizborsky.
Posts—Rev. Frantisek Hala.
Labor and Social Welfare—Josef Soites.
Health—Adolf Prochaska.
Supply—Vaclav Majer.

Victory. While Soviet forces pushed westward through Slovakia, units of the American 3rd Army entered the country near Asch on April 19. But they found no welcome in solidly German Sudetenland, whence many Czechs had been expelled to make room for Nazi fanatics and slave laborers. On May 5, following a May Day strike at the Skoda works in Pilsen, Dr. Hubert Ripka announced in London that the underground had launched its final uprising and seized Prague. Wehrmacht units, already surrendering in droves to Gen. Patton's forces, were still offering fierce resistance to the Soviet armies. As German troops moved to suppress the Prague revolt, Konrad Henlein, Gauleiter of Sudetenland and "Trojan horse" of 1938 (later to die by suicide), added effrontery to criminality by broadcasting an appeal to the United Nations to guarantee continued German possession of the Sudeten areas.

Patton's divisions swept into Pilsen and Karlsbad on May 6, while Red detachments drove toward the capital. Three days later the hard-pressed rebels in Prague were relieved by Marshal Konev's 1st Ukrainian Army while the 2d Army under Marshal Malinovsky fanned out from the Brünn area. The fair city on the Vltava, where Benes and the Cabinet arrived on May 9, was battered by street fighting, bombardment and air-raids. For several days more, after all hostilities had ceased elsewhere on the Continent, Nazi units continued resistance west of Prague. All were soon encircled, however, and compelled to yield, with 700,000 prisoners falling to the Red Army during the last four days of the fighting.

Cession of Carpatho-Ukraine. On June 29 Premier Fierlinger and Foreign Secretary Vladimir Clementis signed with Molotov in Moscow an agreement for the transfer of Carpatho-Ukraine (Sub-Carpathian Ruthenia) to the USSR. Such a cession had been rumored in January and apparently represented the desire of most of the 700,000 Russian-speaking inhabitants of the district which Czechoslovakia had inherited from the Dual Monarchy in 1919 and had lost to Hungary in March, 1939. Ivan Petrushchak, a member of the Czechoslovak National Council who had been sent from London to Carpatho-Ukraine, had presented to Benes late in 1944 a resolution of a Congress held in Uzhorod,

following a plebiscite, which called for the annexation of the territory to the Soviet Ukraine. Petrushchak had originally declared that the Carpatho-Ukrainians wished to remain under Prague, but he changed his mind on the scene and signed the resolution. Various Carpatho-Ukrainian organizations in the United States took an identical view in a memorial presented to Molotov at San Francisco and submitted by him to the British and American delegations.

The final agreement provided for commissions to fix the new boundary. Soviet and Czechoslovak nationals on both sides were permitted to choose their citizenship and to move across the border with their goods and with compensation for immovable property.

Soviet Withdrawal. The loss of the easternmost province to the Soviet Union did not alter the determination of the Czechoslovak leaders to adhere to the policy represented by the alliance treaty of December 12, 1943 (See YEAR BOOK for 1943, pp. 158-9). Gen. Bohumil Bocek, Chief of Staff, announced on May 20 that the new Czechoslovak Army would be equipped by the USSR and would be modeled on the Red Army in its training and organization. But the popularity of the Slavic colossus, here as elsewhere, was not enhanced by the Soviet troops of occupation, who lived off the country and in some instances, as is always inevitable, engaged in depredations and other outrages. Gratitude was widespread toward both American and Soviet forces for substantial aid rendered in relief and reconstruction, but it was tempered by resentment at local abuses and by a general desire to see all foreign soldiers depart as soon as possible.

This aspiration was realized by autumn. Two-thirds of the Soviet troops left the country in July. The Provisional Parliament, meeting in late October for the first time since 1938, unanimously confirmed Benes in the Presidency and endorsed the policies of Fierlinger, who asserted that the USSR was the most reliable guarantor of the Republic's independence. "Alliance with the Soviet Union is the main principle of our foreign policy." By mid-November the last Soviet troops were withdrawn, save for a military mission in Prague and a few thousand guards at specified points. American troops evacuated the western districts at the same time.

Retribution. The restored Republic proceeded promptly against Nazi criminals and their local quislings. In mid-May Marshal Keitel, Walter Funk, Kurt Daluege, Karl Hermann Frank and Albert Speer were included in a Czechoslovak list of Nazi leaders to be prosecuted for their crimes. The 73-year-old Emil Hacha, Nazi puppet-President after Benes' departure in 1938, was arrested by Czech partisans in Prague early in May, but died on June 30 while awaiting trial. Dr. Joseph Plitzner, Deputy Mayor of Prague during the German occupation, was convicted of treason and hanged on September 6.

The Czechoslovak leaders were no less concerned with expelling from the border districts those Germans and Magyars who had played a major role in the Nazi destruction of the State in 1938-39. The prewar policy of tolerance and equality for alien minorities gave way to a program of forcible exclusion which was persisted in despite criticism from Western liberals. Some 500,000 Hungarians and over 2,000,000 *Sudetendeutsch* (out of the total of 3,250,000) were involved. Britain and the United States blocked expulsions in June and persuaded Prague to suspend action during the sum-

mer in accordance with the Potsdam formula that the enforced migration should be effected "in an orderly and humane manner." In the fall the compulsory transfer of Sudeten Germans to the Reich was resumed by installments, with most of the property of the migrants confiscated as reparations. Fierlinger estimated in September that 1,200,000 Sudetens had been expelled or had left voluntarily before the Potsdam Conference, and that the removal of the balance would extend over another year.

In commemoration of the victims of Nazi fury, the Lidice Memorial Committee in the United States announced plans in September for the erection of a \$1,500,000 "open cathedral" on the site of the town destroyed on June 9, 1942. Of the living dead—i.e. political prisoners and forced workers deported to the Reich during the years of darkness—1,100,000 had been repatriated by November.

Toward a New Economy. On October 24 President Benes signed five decrees nationalizing all mines, iron and steel plants, textile and shoe factories, commercial banks and insurance companies. All cooperative enterprises were exempt. Properties of enemy nationals and native collaborators were confiscated. All others, including foreign concerns, were paid for in Government bonds at a valuation based on balance sheets filed for tax purposes. Socialization was approved by all political parties. "In the West," said Benes, "some individuals assert that we are in the hands of the Soviets, yet the Governments look at things differently. . . . I think that on the nationalization question, we shall have no difficulties abroad." On November 5 Masaryk made a plea for Western understanding of the program, pointing out that only through such measures could the people of the Republic put an end to the domination of foreign capital and to the banking chaos left by the Nazis.

Frontiers and Food. Among the many questions unanswered at the close of the year was that of the future status of the Teschen area, seized by Poland in October, 1938, and still claimed by the new Polish Government, which remained in occupation of the district. Rumors of Soviet support for Prague's claim failed to materialize. Masaryk asserted on December 4 that his Government would refuse to carry on further negotiations with Warsaw over Teschen, but was prepared to submit the issue to the UNO or some other tribunal. Meanwhile, no progress was registered toward the Czechoslovak-Polish alliance projected during the war years.

Of more immediate concern to the citizens of the Republic were the problems of economic reconstruction. Foreign trade, upon which the fortunes of Czech industry depend, developed haltingly in the absence of adequate transport facilities, currency stabilization and new commercial agreements. Czech officials and manufacturers sought imports of wool, leather, and cotton (some of which were supplied by the USSR under the trade accord of early summer) and planned to resume exports of glassware and china. Hopes for an American credit of a billion dollars had not been realized at the turn of the year. UNRRA aided the destitute with the assistance of American Relief for Czechoslovakia, Inc. But by December the average diet comprised only 1,600 calories per day (compared to 3,000 in the United States), and 700,000 children were estimated to be suffering from deficiency diseases.

Toward a New State. Politics marked time, pending the resolution of current international and economic issues. Note circulation had increased more

than ten-fold since 1938, but a program of reconversion inaugurated in November promised to put an end to inflation and to provide a stable medium of exchange. The lack of the embittered partisanship characteristic of most other liberated lands furnished new proof, if any were needed, that the democratic way of life was deeply rooted among the Czechoslovak people. Some old leaders passed from the scene—e.g. Kamil Krofta, Foreign Minister in 1936–38, who died on August 18 after spending most of the war years in a Nazi concentration camp. The Provisional Parliament, chosen by the Popular Front of Leftist parties, was to be replaced, according to plans formulated in the autumn, by a new legislature to be elected early in 1946.

President Benes expressed his intention of maintaining a coalition Government of all parties for a period of 5 or 6 years. In Bohemia and Moravia four major political groups were functioning (the Catholic Party, the Socialist Nationals, the Social Democrats and the Communists) and in Slovakia two (the Democrats and the Communists). On November 6 the Cabinet resigned and was at once reconstituted, with the Communists retaining the posts of Interior, Information and Education, and with Dr. Jaroslav Stransky becoming Deputy Premier and being replaced as Minister of Justice by Prokop Drtina, political secretary of the President.

The spirit of the new Republic was well expressed by Benes. "I have no illusions," he observed on August 17. "The Second World War began at Munich. With the capitulation of Japan it is finished. But the world is in ruins. . . . Real peace is the normal condition of life—with no internal revolutionary movements, the establishment of parliamentary life, the reestablishment of industry, and normal, neighborly relations between countries. All the occupied lands were nourished during the war by hope. This life of hope must be continued for several years before general peace will come to Europe." To the British Ambassador Benes declared on October 28: "We are solving our problems in a somewhat radical way. This is demanded by present-day circumstances. But we shall remain steadfast in our adherence to democratic principles, and we shall respect the just interests of our friends at home and abroad. . . . In the near future freely democratic elections will take place, and with these our internal development will be completed and the full state of our postwar democracy will come into being."

See GERMANY, POLAND, U.S.S.R., UNITED NATIONS.

FREDERICK L. SCHUMAN.

DAIRY INDUSTRY, Bureau of. A Bureau of the U. S. Department of Agriculture, established as the Bureau of Dairying in 1924. It conducts investigations in the breeding and management of dairy cattle, in nutrition, and in the physiology of milk secretion and of reproduction. It also records the production of cows in dairy-herd-improvement associations for the purpose of identifying animals possessing an inheritance for transmitting superior milk- and butterfat-producing ability to their progeny. It develops sanitary methods of handling milk on the farm, in transit, and in dairy plants; and studies other factors affecting the wholesomeness and commercial value of milk. Chief: O. E. Reed. See AGRICULTURE.

DAMS. With the ever-increasing number and wider distribution of projects involving reservoirs for

domestic and industrial water supply, irrigation, power development, and flood control, the design and construction of dams is correspondingly increasing and important. Many such projects in various stages of progress, were halted by war conditions and are now being resumed; but progress is slow on account of the shortage of engineers and labor. A majority of the dams are for two or more of the purposes noted above and are under the single or combined control of the Corps of Engineers, U. S. Army (War Department) or the U. S. Bureau of Reclamation, the former having jurisdiction over all flood control and navigation projects and the latter over irrigation projects.

Increasing the height of dams for increased reservoir capacity involves many difficulties in design and construction. A notable example is the past and prospective raising of great Aswan Dam on the Nile (noted below). Still bolder is the raising of the concrete-arch Ross Dam on the Skagit River, serving the municipal hydro-electric plant at Seattle, Wash. Its original height (1940) was 290 ft. It is now being raised 185 ft. (475 ft. in 1946); preliminary work is in progress for an additional 100 ft. (575 ft.); and a further 100 ft. is projected for an ultimate height of 675 ft.

At Tacoma, Wash., the second dam and municipal power plant on the Nisqually River was completed in 1945. This is the Alder Dam, concrete arch type, 330 ft. high, and 1,500 ft. long on top. It is two miles above the LaGrande Dam, which was completed late in 1944 and is of the concrete gravity type, 215 ft. high and 500 ft. long. For a large flood control project in California, which includes the Sacramento and American Rivers, the State, in cooperation with the Corps of Engineers, U. S. A. and the U. S. Bureau of Reclamation, has plans for about 15 dams. A project for a dam in the Columbia River (U. S. Engineers), near The Dalles, Oregon, and 53 miles above the Bonneville Dam, necessitated study of foundation conditions by divers in water 200 ft. deep, with a swift current. Dams in the Columbia and Willamette Rivers will require the relocation of 200 miles of railway and 100 miles of roads now within the reservoir areas. A rock dam or weir in the Colorado River, near Blythe, Calif., is to raise the water level 3 ft. to serve a new intake for the canal of the Palo Verde irrigation district.

The Kentucky Dam on the Tennessee River (Tennessee Valley Authority), dedicated October 10, is the largest of a series of dams and locks opening barge navigation from the Ohio up to Knoxville, Tenn., 650 miles. Work is to be resumed on other T.V.A. dams, halted by the war. At the Fontana concrete dam (T.V.A.), completed in 1945, special instruments were installed in the concrete to indicate its behavior or internal condition in relating to the grouting of joints and the controlled cooling of the concrete. Arkansas has given permission to a company to build a dam for rice irrigation across Two-Prairie Bayou. In Texas, near Waco, the Whitney Dam (U. S. Engineers), for flood control on the Brazos River, will be 190 ft. high, with 7,500 ft. of concrete and 4,500 ft. of earth embankment. The Brazos Reclamation Board proposes a power dam on this river and two flood control dams on its tributaries, the Leon and Lampasas rivers. The Barker Dam on Buffalo Bayou was completed as part of a flood control project for the protection of Houston.

Bids for completing the Merriman Dam (earth embankment, halted in 1942) on the new Delaware River water supply for New York City, were rejected in September, as being too much higher

than the original bids of 1939. One cause of the higher prices was the increase in labor rates. A flood control project (U. S. Engineers) involving 14 dams on the Potomac River has been abandoned on account of opposition to the flooding of fertile land by the reservoirs. A proposed flood protection dam at Springston, Idaho, on the Coeur d'Alene River, is also opposed, as the reservoir would submerge valuable mining properties. A concrete arch dam on the Green River, near Morrisville, Vt., is planned for increased storage for the local power plant. And Vermont has approved a dam at Thetford, as part of the flood control project (U. S. Engineers) for the Connecticut River.

Serious erosion of the face of the Kingsley Dam on the North Platte River, near Ogallala, Neb., (Central Nebraska Public Power & Irrigation District), due to high waves, has necessitated a protective covering or revetment of large concrete blocks and stone filling, part of which had to be placed under water. Emergency movable dams to stop the rush of water through locks in case of damage to the gates by ships, have been discussed in reports of the American Society of Civil Engineers.

In Mexico, the National Irrigation Commission plans several irrigation dams, and has built a new type of dam on the Conchos River, in Chihuahua. This Las Vergenes Dam, 157 ft. high, consists of a series of concrete walls parallel with the stream; their upstream ends are sloped and are enlarged to form T or mushroom heads which make contact with each other and so form the face of the dam. The new treaty with Mexico over the Rio Grande water provides for three storage and flood control dams. Bolivia plans five dams for irrigation and power, and has the Angostura Dam under construction. Brazil proposes a series of dams on the Sao Francisco River. Uruguay has built a dam at Rincon de Bonete, on the Rio Negro, similar to the Mexican dam described above.

A third raising of the great masonry dam at Aswan, on the Nile, in Egypt, is proposed. It was raised 16 ft. in 1912, and 33 ft. in 1933; the present plan is for an additional 38 ft. in height. The Union of South Africa is planning the Bethulie Dam on the Orange River, for irrigation and power development. In India, the government of the Punjab Province has contracted with an American firm for a concrete gravity dam 550 ft. high on the Sutlej river, to serve an irrigation project. In New Zealand, the government plans a series of ten power dams on the Waikato River.

Toward the close of the war, the Germans blew out the spillway gates of the Urft River dam, in Germany, but did not wreck the structure. This was one of five dams in the Ruhr industrial district which the Germans intended to destroy. They were prevented from doing so by the rapid advance of the Allied troops. On the other hand, the Allied troops bombed the Krebs Dam on the Rhine, near Basle, and thus blocked navigation by the Germans. In Holland, the Germans breached the Walcheren Dam in four places. These breaks had to be closed before the winter or Walcheren Island would have been flooded by the North Sea.

France has several projects for power dams, including four on the Dordogne River.

In England, the Ladybower Dam of the Derwent Valley Water Board was completed in November for additional water supply to a group of cities. Power projects in the north of Scotland will require three dams. The provincial government of Quebec, Canada, plans a power dam at Lake Dozois. Russia is said to plan a number of dams

for irrigation and power in both Asiatic and European Russia; it has repaired the Dneiper Dam and is replacing the power equipment removed by the Germans, as well as putting in new American machinery. In Iran (Persia) the Irrigation Administration, which is under American direction, built, on the Karun River, a weir or overflow dam composed of large, smooth boulders placed in two rows, with concrete filled in between them.

See Flood Control, Water Supply, Waterways.

E. E. RUSSELL TRATMAN.

DEFENSE TRANSPORTATION, Office of (ODT). V-J Day, August 14, brought a shift in the 1945 activities of the Office of Defense Transportation. Before that date the agency, under Director Col. J. Monroe Johnson, was vigorously engaged in securing the maximum utilization of the country's transportation facilities for the successful prosecution of the war. When Germany collapsed in May, transportation problems became more acute on the West Coast than on the East Coast. After V-J Day, the ODT began a process of demobilization, with the revocation of a number of orders and drastic cuts in personnel.

Reduction of ODT field offices proceeded rapidly after V-E and V-J Days. The liquid transport department was closed down entirely in September. All offices of the highway transport department and 14 railway department field offices were closed by Dec. 1.

By November, 23,000 special advisory committees in various fields of transportation had been dissolved. ODT Director J. Monroe Johnson remained in office into 1946 to supervise the working of the few remaining controls (chiefly affecting rail transportation) with a skeleton staff.

Existing controls over railroad freight traffic continued in the first half of 1945 and new and drastic restrictions were placed on passenger traffic. Vigorous measures were adopted to cut down civilian passenger travel to conserve rail passenger equipment. By the use of all publicity media, and the organization of volunteer cooperating local committees, the "Vacation-at-Home" idea was actively promulgated. During the spring and summer, professional and amateur sports authorities cooperated with the ODT to cut down sport-connected travel.

Voluntary cancellations of conventions were continuing as the year opened. In January, at the instance of the Office of War Mobilization and Reconversion, attendance at conventions and group meetings was limited to a maximum of 50 persons from out-of-town. The War Committee on Conventions, headed by Colonel Johnson, was set up to handle applications by sponsors and promoters of conventions, trade shows, fairs, and the like. During the 8 months existence of the "convention ban" (Feb. 1 to Oct. 1), 4,095 convention applications were reviewed by the committee and only 495 were approved. Resulting travel savings were estimated at nearly a billion railroad passenger miles.

Heavy rail movements of returning troops, from both European and Pacific theatres, called for such ODT measures as the elimination of sleeping car runs of less than 450 miles; shortening of advance passenger space reservation time to five, later to 14 days; assignment of about two thirds of all Pullman sleeping cars to military use; making available all passenger coaches for military use under ODT supervision; and the ordering of 1,200 new troop sleepers for military use. On the other hand, orders were revoked in August and September which had forbidden various special train services, such as

seasonal resort schedules, and the use of private cars.

In November, the ODT required air lines to assign to returning service men 70 percent of all space in plane flights from four West Coast to six East Coast points. This was the first ODT order affecting air service.

The Toledo, Peoria & Western Railroad, which had been operated by the ODT since early in 1942, was restored to private control in October. The Illinois Central Railroad, taken over by the ODT in August, 1945, following a labor dispute, continued operation without change of personnel, with an ODT official as Federal Manager.

Railroad manpower shortages, especially on the West Coast, engaged the attention of ODT officials throughout the year and various remedial steps were taken with the cooperation of the Army and other federal agencies.

In the opening months of the year, blizzards in the Northeast called for emergency measures to relieve railroad congestion. All through the year there was difficulty in supplying enough box cars to move grain in the West, and a number of emergency actions were taken by the ODT, the ICC, and the Association of American Railroads to relieve congestion and to rush box cars to the grain belt.

W. F. Kirk, Western Railway Director of ODT, continued his activities in routing railroad freight west of the Mississippi until Nov. 1, when his services were terminated.

The export permit system, set up to prevent congestion on rail lines leading to the ports by controlling shipments of freight consigned to overseas destinations, was ended in October.

On the nation's waterways, the early part of the year saw heavy movements of bulk commodities under ODT supervision. More steel barges were built to help handle the traffic. A volume of a million barrels a day of petroleum products was being moved over inland waterways during the first half of the year. Through the whole war period a total of 1,731,034,485 barrels of petroleum products was handled, besides 345,835,040 tons of iron ore; 62,827,283 tons of limestone and large quantities of other bulk commodities. After V-J Day the ODT gave up its controls over the chartering, sale, leasing, loading, routing, and operation of craft on inland waterways. On Nov. 29, the ODT took over the tugboat operations of the Great Lakes Towing Co., whose craft had been rendered idle by a strike.

During the first five months of the year the ODT speeded up rail shipments of petroleum products by imposing heavy penalty demurrage charges so as to compel swift loading and unloading of tank cars, and also by requiring daily reports on the status of every car. In the first quarter of 1945 a greater volume of petroleum and petroleum products was moved to the Atlantic seaboard than during any earlier comparable period in history—166,323,838 barrels.

During the first half of the year, the ODT highway transport department continued its campaigns to conserve local transit facilities, and to conserve tires and equipment; expanded its truck joint action program, and extended preference to veterans applying for certificates of war necessity.

After V-J Day came the lifting of a large number of controls over various classes of highway transportation. These included the regulation of bus, street car, and taxi operation; restriction of deliveries by truck; a road speed limit for motor vehicles, the rationing of new motor vehicles and

the restriction of their operation through the issuance of certificates of war necessity.

By Nov. 1, the ODT had returned to private operation 103 midwest trucking concerns which had been taken over in August, 1944. On July 28, 1945, the ODT ended its control of more than 1,600 trucking lines in Chicago and vicinity, which had been taken over on May 23 and June 15.

On Nov. 21, the ODT assumed control of the property of the Capital Transit Company operating street cars and buses in Washington, D. C. and suburban territory. The action was taken at the direction of President Truman, following two strikes within a period of two weeks. This control was terminated on Jan. 8, 1946.

The War Production Board Controlled Materials Plan terminated Sept. 30. Under this plan, the ODT had been claimant agency for the transportation industry. As such, during the 3½ years ending June 30, 1945, it had secured the production of: 1,082 steam, 1,741 diesel electric, 38 electric locomotives; 155,002 freight cars, 1,200 troop sleepers and 400 kitchen cars; 181,146 trucks and tractors; 19,580 integral buses; 5,572,392 tons of replacement rail.

An additional 1,200 troop sleepers and 400 kitchen cars to be built under ODT sponsorship were scheduled for completion by the end of the year, but owing to labor difficulties less than half of them were actually finished by that time. Production of the first railroad passenger train cars since 1942 was scheduled to begin late in the year, with 750 due for completion by June, 1946.

J. M. JOHNSON.

DENMARK. A kingdom of northwestern Europe, comprising the peninsula of Jutland, the two main islands of Zealand and Fyn, and about 200 smaller adjacent islands in the Baltic. Denmark was occupied by German armed forces from April 9, 1940, until May 5, 1945. The Faeroe Islands (q.v.) an integral part of the kingdom, were occupied by British troops on April 13, 1940, for the duration of the war. Greenland (q.v.), a Danish dependency, remained under the control of the local Danish administration but accepted United States protection for the duration of the conflict. The King of Denmark was King of Iceland (q.v.) until June 17, 1944, when the independent Republic of Iceland was established. Capital of Denmark, Copenhagen. King, Christian X, who succeeded to the throne May 14, 1912.

Area and Population. Total area excluding the outlying possessions, 16,575 square miles. Estimated population, July 1, 1942, 3,903,000, as compared with 3,844,000 at the census of Nov. 5, 1940. The live birth rate per 1,000 inhabitants was 21.3 in 1943 (20.9 in 1942); death rate, 9.6 (9.6). There were 37,846 marriages in 1943 (37,479 in 1942). Populations of the chief cities (1940 estimate): Copenhagen 890,130, Aarhus 99,881, Odense 85,521, Aalborg 55,621.

Government. The Constitution of June 5, 1915, as amended Sept. 10, 1920, vests executive power in the King acting through a cabinet responsible to the Rigsdag (Parliament). Legislative power rests jointly in the King and Rigsdag. The Folketing (lower chamber of the Rigsdag) consists of 149 members elected for four years by proportional representation. The Landsting (upper chamber) comprises 76 members serving for eight years; its powers are very limited.

Education and Religion. There is no illiteracy. The elementary schools had 407,355 pupils in 1940; secondary and middle schools 67,064; the two uni-

versities had 6,474 students enrolled. The 1921 census showed 3,221,843 Protestants, 22,137 Roman Catholics, 5,947 Jews, and 17,349 others.

Production. Denmark is essentially a land of intensive dairy farming. Industry, however, is also important, despite an almost complete lack of minerals and water power. Shipbuilding, in particular, is a leading Danish industry. Before the war 35 percent of the working population was employed in agriculture and dairying and 33 percent in industry. Commerce and fishing were the other important occupations. It was estimated in July, 1945, that Denmark at the end of the German occupation still possessed the following percentages of its prewar livestock: horned cattle, 97 percent; pigs, 52; poultry, 54; horses, 106.

Foreign Trade. In 1944 the total value of imports was estimated at 1,167,600,000 crowns; exports, 1,347,600,000 crowns. As in previous years during the occupation, Germany accounted for about 70 percent of Denmark's foreign commerce both on the import and export side. Germany's accumulated debt on clearing account totalled 2,692,000,000 crowns on Sept. 30, 1944, not including occupation costs.

Events, 1945. The Long Vigil. The early months of 1945 were, in many respects, the hardest and most trying in Denmark's five years of suffering under the Nazi heel. Hard pressed by victorious Allied forces closing in on the Reich from east, west, and south, the Germans in desperation looked to the north as a potential last refuge and stronghold. Evacuees from the bomb-scarred cities of Germany streamed by the tens of thousands into the comparative safety of Danish towns and villages. This influx of unwelcome guests further aggravated the serious shortages of housing, clothing, fuel, and other essentials which the critical phase of the war had caused in Denmark as in other occupied countries. However, thanks to the country's highly developed agriculture and dairy industry, the food situation remained comparatively satisfactory.

Nerves were taut on both sides and violence increased daily. Winston Churchill, in a New Year's message to the Danish Resistance movement, declared: "Now, as the enemy is near defeat and becomes more violent, we must all stand firm. We must strengthen our grip to hasten the end. With cool heads and stout hearts let us march together to the victory which will restore the ancient liberties of the Danish people."

The Danish resistance fighters responded magnificently to this call for daring action to hasten the defeat of the tottering enemy. Their most effective contribution to victory was a large-scale sabotage campaign which at the most critical moment paralyzed the Danish railroad system, especially in Jutland, and greatly impeded the planned transfer of German troops from Finland via Norway to the Western front. General Dwight D. Eisenhower, in a special communiqué issued on March 5, declared that attacks by the Danish underground on German troop movements had become so effective that not a single train was able to reach Germany without having been delayed. "This action by Danish saboteurs is an effective contribution to current military operations on both the Western and Eastern Fronts," the communiqué said.

As Danish resistance stiffened and spread, the Gestapo intensified its repressive action. More Danish patriots were executed in the first four months of 1945 than had been put to death in all the four preceding years. Street clashes between patriots and quislings also increased in frequency and ferocity. During the first half of January, 51

persons were killed, with the toll almost equally divided between friends and foes of the Germans. The last week of February cost sixty lives.

Meanwhile, signs of a serious rift within the Nazi leadership multiplied. Early in February, the German commander in Denmark, General Hermann von Hanneken, was relieved of his command, after widespread mutinies and rioting had occurred among his forces. He was succeeded by General Georg Lindemann, former commander in the Baltic sector of the Eastern front. No sooner had Lindemann arrived at his Danish headquarters at Silkeborg in Jutland, than the building was blown up by saboteurs on Feb. 23; the general went scot-free, though, as he had done a few days earlier when an attempt was made on the train carrying him to Silkeborg. There were also conflicts between the German Minister (virtually the civil governor) in Copenhagen, Werner Best, and high officers of the S.S. and the Gestapo, especially Police General Guenther Pancke.

On March 21, at noon, the Gestapo headquarters in Copenhagen, in the American-owned Shell House office building, was destroyed completely in a daring raid by six British mosquito bombers. A large number of Gestapo officials, both German and Danish, were killed in the attack, but eight Danish patriots, held as hostages in the building, also lost their lives. However, twenty others, including Dr. Mogens Fog, head of the Freedom Council, the central organization of the Resistance movement, escaped in the confusion.

April was a month of nerve-racking uncertainty for the Danes who were alternately swayed by hopes of imminent liberation and despair at the prospect of being caught in a long-drawn-out struggle for "Fortress Denmark." On the occasion of the fifth anniversary of the German invasion, on April 9, President Roosevelt sent a message to the Danish and Norwegian peoples in which he promised, "Very soon the period of martyrdom will be ended." And British Foreign Minister Anthony Eden declared: "Today Denmark's greatest hour is close at hand."

Liberation. The suddenness and swiftness of the German collapse in the last days of April and the first days of May came as a great surprise to the Danes. Up to the last minute, the Nazis were working feverishly on the elaborate system of fortifications laid out especially on the west coast of Jutland.

The first break in the hitherto iron-bound German control occurred on May 1, when Danish correspondents of Allied newspapers again were able to telephone stories to Stockholm. The following day, however, censorship was restored, and demonstrators again were arrested by the Gestapo, which had its last, ineffectual fling at terrorism.

"Denmark's greatest hour," as Mr. Eden had put it, finally struck on May 4, when the surrender of German troops in Denmark was announced, as British forces on the Jutland Peninsula raced across the Danish border. Instantly, strategic points in Copenhagen and elsewhere were taken over by armed men under the direction of the Freedom Council. Delirious crowds surged into the streets, wildly singing, shouting, waving Allied and Danish flags. Although the oft-predicted "night of the long knives" did not materialize, a good deal of unnecessary bloodshed occurred as Nazi stalwarts and Danish traitors engaged in local skirmishes with the Resistance forces. About sixty people were killed and several hundred were wounded in this fighting, which continued even after the arrival in Copenhagen of British airborne troops on May 5.

Even before the announcement of the German surrender, King Christian stood ready to restore constitutional guarantees and a national administration. As early as May 2, he summoned former Premier Vilhelm Buhl, leader of the Social-Democrats, and asked him to form a Cabinet as soon as conditions permitted. From all parts of the country, members of Parliament started out toward the capital in anticipation of a royal rescript convening the Rigsdag. This was issued on May 7. Two days later the Rigsdag met to hear an opening address by Premier Buhl who promised a speedy return to normal conditions. The new government was based on a coalition of all major parties, with the Resistance leader John Christmas Moeller in the post of Foreign Minister and other underground leaders in various key positions.

The Purge. In his speech to the Rigsdag, Premier Buhl promised that Danish collaborationists would be brought to book and all illicit gains made during the period of occupation would be confiscated. Actually, by that time a good many "stikkere" (Gestapo informers) already had been liquidated by the wrathful patriots and thousands of Danish Nazis had been taken into custody.

Among those arrested in the first days following liberation was the notorious chief of the Danish Nazi party, Fritz Clausen, who had vainly attempted to escape across the South Jutland frontier into German territory. Jens Moeller, leader of the German minority in South Jutland (North Schleswig), also was seized. The German envoy and plenipotentiary in Copenhagen, Werner Best, surrendered voluntarily to Resistance forces. Other prominent prisoners included Peter Knutzen, director general of the Danish State Railways; former Minister of Public Works Gunnar Larsen; and Helmer Rosting, president of the Danish Red Cross and former High Commissioner for Danzig, who later committed suicide. Fifty officers of the army and navy were dismissed and degraded. The list was headed by Colonel Christian P. Kryssing, who had organized a Danish volunteer corps that fought with the Germans on the Eastern front.

By the end of May, arrests of traitors and collaborationists totalled 12,000 of whom about 7,000 were expected to be brought to trial. On May 25 a bill providing severe penalties, including death, for crimes committed in the service of the Germans during the occupation was submitted in Parliament by the Minister of Justice Busch-Jensen. The bill was passed by the Rigsdag and signed by the King early in June. Up to the end of the year, however, no major trial of either German war criminals or Danish traitors had taken place in Denmark.

Reconstruction Tasks. Although on the whole less grave than in other liberated countries, the economic problems facing the Buhl Government were manifold and pressing. Foremost among them was the fuel shortage which remained acute throughout the year. Normally Denmark, which has no raw materials herself, imports all her coal from Germany and Great Britain. With the former knocked out completely from international trade, and the latter unable, for some time to come, to resume exports of coal on a prewar scale, the Danes were getting barely enough fuel to supply the most urgent public services. As a result, Danish industry, in the months following liberation, was almost completely paralyzed and unemployment, which took a sharp upward turn, was expected to reach a quarter of a million people in mid-winter—a disastrous figure for such a small country. Like Sweden, Denmark sought relief in

a trade agreement with Poland, but there was little hope that substantial deliveries of coal from that country could be expected before some time in 1946.

Another economic problem for Denmark was, paradoxically in a semi-starved Europe, a surplus of meat that began to accumulate in July and by mid-September amounted to 3,000 to 4,000 tons a week of beef alone. Not that there were no willing takers for this surplus, but lack of shipping space prevented its export to where it was most needed. Shipments of bacon, butter, and eggs to Britain—Denmark's best customer for such produce before the war—were resumed, but only on a limited scale, and the Danes complained that the ships mostly returned empty, instead of carrying raw materials and industrial products from Britain as before the war.

Public works costing 600,000,000 kroner—more than the total yearly expenditure of the state before the war—were planned by the government in an attempt to cope with the critical employment situation.

A source of considerable worry for the government was also the presence of about 600,000 Germans in the country at the time of the capitulation, of whom about one-half were members of the armed forces and the other half were evacuees, administrative personnel, and "carpet-baggers." By the end of June virtually all the military had been sent back to Germany, but there was not enough transportation available for all the civilians, nor were there reception centers ready for them in the Reich. Thus, large numbers of German civilians stayed on in Denmark throughout the year, despite growing protests from the native population.

An official announcement from SHAEF on July 9 declared its mission in Denmark to be about completed, and by the end of November all Allied forces had been withdrawn from Danish territory with the exception of a small Russian garrison that remained on the island of Bornholm. There was much wondering in Denmark whether the Russians perhaps intended to stay on the strategic island, but Moscow disclaimed all annexionist designs. Despite their unexplained lingering on Bornholm, the Russians scrupulously refrained from interfering with the Danish administration of the island and the relationship between them and the local population was good.

Denmark Admitted to United Nations. The question of whether Denmark, although she never had a chance to declare war on Germany, should be regarded as one of the United Nations was taken up and favorably decided at the San Francisco Conference. On June 1, Wilhelm M. Morgensstjerne, Norwegian Ambassador to Washington, presented a formal request to Secretary of State Stettinius that Denmark should be admitted to full membership. According to Mr. Morgensstjerne, Denmark "because of her geographical and military situation was not in a position to resist the aggressor, who wantonly and without any warning attacked and occupied Danish soil." The motion to admit Denmark was offered to the executive committee by Lord Halifax of Great Britain, and seconded by Dr. Alexander Loudon of the Netherlands and Joseph Paul-Boncour of France. On June 5—the 96th anniversary of the Danish Constitution and a national holiday in Denmark—the Conference by unanimous vote invited Denmark to become the fiftieth of the United Nations.

A few days earlier, on May 21, Foreign Minister Moeller, in a speech at Hilleroed, expressed the view that Denmark in actual fact had been at war

with Germany ever since the great revolt of August 29, 1943. He concluded: "But when Denmark has been fighting Germany since 1943, it means that we are still at war with Germany. To me there is no difference between Denmark's position and that of the Allied countries. They as well as Denmark are at war with Germany, they as well as Denmark have suspended hostilities, but Denmark's war with Germany does not cease until the day peace is concluded."

On Sept. 11 the Danish Ministry of Foreign Affairs announced that Denmark had ratified the United Nations Pact, together with the statute for an International Court of Justice. The Danish Government also authorized the formation, in November, of a division of 11,432 men to assist in the Allied occupation of Germany, some time in the spring of 1946.

The South Schleswig Question. Immediately after the fall of Germany, a movement sprang up in Denmark for the annexation of South Schleswig which had belonged to the Danish Crown up to the war of 1864. After World War I, Denmark recovered the northern half of the lost province (North Schleswig) by virtue of a plebiscite held in 1920 under international control, but at the same time the inhabitants of South Schleswig voted overwhelmingly against secession from Germany.

Claiming that in spite of the international commission many Danes in 1920 had been coerced by German landlords and officials into voting for Germany, and that since then the Danish minority in South Schleswig had been ruthlessly dealt with—especially under the Nazi regime—wide circles in Denmark held that the time had come to extend the country's frontier to the old border, or even as far as the Kiel Canal. Others favored the establishment of an autonomous state of Schleswig with a mixed Danish and German administration.

From the start, however, the Buhl Government firmly opposed all such plans, supported in this stand by a majority of the influential press organs. Both the Premier and his Foreign Minister repeatedly spoke out against annexation. In an address to the Social-Democratic Congress in Copenhagen, on August 21, Mr. Buhl declared: "Denmark has no frontier problem. The Danish south frontier was firmly fixed according to the plebiscite following the first World War. The violent events of the past few years have overthrown many frontier agreements, but the relationship between the Danes and Germans must be viewed against the historical background; only irresponsible people could believe that the German people will forever remain a weak and exhausted nation. The Danish Social-Democrats wish to state firmly and clearly that we oppose any attempt designed directly or indirectly to bring the South Schleswig territories under Danish sovereignty or administration."

In spite of this official attitude the Schleswig question continued to agitate public opinion, especially after it had been learned that several hundred thousand evacuees from the former German territories east of the Oder were on their way to South Schleswig for resettlement. Fearing that this influx of Germans would completely swamp the Danish minority in South Schleswig, the influential South Jutland-Danish Associations on Oct. 11 published an appeal to the government to intervene with the Allied Control Council. But the British authorities of occupation in North Germany declared that Schleswig, like any other part of Western Germany, must take its share of evacuees from the east. Otherwise, the British took no stand for

or against the Danish claims to South Schleswig.

Elections and a New Government. On Oct. 30, a general election was held in Denmark, preceded by a lively campaign during which a futile attempt was made to merge the Social-Democratic and Communist parties. Participation was exceptionally heavy, about 90 percent, with 2,049,536 votes cast.

The results were pretty much what had been expected: the Social-Democrats lost heavily, while the Communists gained correspondingly. On the right, the Agrarian party made some gains at the expense of the Conservatives. This is how the vote compared with the last election, in 1943:

	1945	1943	(1939)
Social-Democrats	671,664	894,636	
Agrarians	480,000	378,463	
Conservatives	373,854	421,051	
Communists	255,183		(40,893)
Radicals (Liberals)	166,843	175,025	

In the new Rigsdag, the Social-Democrats hold only 48 seats as compared with 66 in the old; the Agrarian party has 38, a gain of ten; the Conservatives lost five, retaining 26; the Radicals have 12 (—1); and the Communists now have 18 as against three before the war. Two small groups hold four and three seats, respectively.

As a result of this election, the Buhl Cabinet resigned on Oct. 31. Attempts of the outgoing Premier to form a new coalition government met with no success. On Nov. 3, King Christian asked the Agrarian leader Knud Kristensen, who had been Minister of Interior in the Buhl Cabinet, to form a government. Hesitatingly, Mr. Kristensen accepted. On Nov. 6 he presented his Cabinet list to the King.

The new Danish Government, headed by Mr. Kristensen, is an all-Agrarian Cabinet, without a majority in the Rigsdag, and supported only, in a non-committal way, by the Radicals. All other parties have adopted a wait-and-see policy toward it. Of the Cabinet members, none was previously well known outside of Denmark.

JOACHIM JOESTEN.

DENTISTRY. The end of 1945 found dentistry at low tide with little to indicate any upswing. Dentists released by the armed services are inclined to relax or to engage in post-graduate and refresher courses before resuming civilian practice which more than 90 percent intend to do. Private practitioners are still struggling unsuccessfully with the problem of how to do more work for more people. Abandoned by the Army and Navy, dental schools are facing a year in which their available facilities for first year students will be only about half used. Book and magazine production is at a very low level. The social and economic problems facing dentistry seem staggering and solution of them remote and not very promising.

Organized Dentistry. All general meetings were cancelled. Small groups met to elect officers, prepare budgets and transact only essential business. Most significant were the conferences and group meetings having to do with public health and post-war planning. Very pertinent thereto are the figures presented to such groups for the number of United States dentists and the dentist-population ratio now, in the past, and projected into the future. For the first time in a century during the 1930-1940 decade there was an actual decrease in the number of dentists, but at the same time a considerable increase in population. Surveys indicate no diminution of the need for dental care. The estimates of the work urgently required are fan-

tastically in excess of all available facilities. The two most serious deficiencies are personnel and money. The measures suggested include above all the promotion of research and most especially in the area of prevention and control of dental disease, the increase materially of the number of persons studying dentistry so as to enlarge personnel, the hearty support of all programs for dental care of children so as to secure early correction of all dental defects, and the conduct of ample projects for public health education in the field of conservation of dental health. There is strong support for a national institute for dental research; a bill has been introduced into the Congress to that end. The health departments of 27 states supply one or more laboratory services for dentists and their patients, such as examination of bacterial smears, salivary bacterial counts and biopsy tests.

Education. The names of the 36 accredited dental schools were released by the Council on Dental Education in June. Of these only 24 are rated as fully approved. Since then one of the approved schools (Columbia) has been suspended temporarily by the Council and also taken from the state list of approved schools by New Jersey. These actions followed the announcement of President Butler of Columbia that the faculty of dentistry had been integrated with the faculty of medicine and was to be called the School of Dental and Oral Surgery. The Army terminated its program of dental education very abruptly. The Navy's withdrawal has been gradual and will be completed by some time well into 1946. The net result of these acts and the activities of induction boards is a 1945-1946 first-year class in the U. S. dental Schools of just about half that of the war years of 1944 and 1943, and well under that of any recent year. This will serve to hamper seriously the announced programs for the conservation of dental health. The University of Washington has established a dental school in Seattle. This coupled with the project of the Department of Higher Education of Oregon to take over a long existent school in Portland will supply the North Pacific area with adequate facilities for training dentists. The University of Norway has transplanted temporarily a major portion of its program for the training of dentists to three United States dental schools; the number of students involved is 42.

General. The fluorine projects at Grand Rapids, Michigan, and Newburg, N. Y., are in full operation. It is expected that the addition of fluorides to the domestic water supply will very materially reduce (35 to 60 percent) the amount of dental caries in children born and raised in these communities. Evanston, Ill., and Marshall, Texas, have reported adoption of this procedure. This seems to be the only current approach to mass reduction of dental disease in children that is not heavily handicapped by the lack of funds or dental personnel. Some 267 items in the periodical literature of 1945 seemed worth abstracting for general distribution. The selections were made from dental, medical and scientific journals both here and abroad. Of these 105 were printed in other than dental journals and there were included 40 articles from foreign periodicals. As usual the subject of prosthetics (dentures, tooth crowns and bridgework) received most attention. Next in order were anesthesia, oral surgery and the public health aspects of dental practice. Much attention was given to the use of penicillin in the treatment and control of mouth infections. It is considered as an agent of great value. Research output, as measured by the number of articles printed and items reported

at scientific meetings, is less than half that of the prewar years, perhaps as low as one-third. Book printings announced are chiefly new editions of existing texts but the technique of practice is without noteworthy change, and the trend to a greater use of the newer synthetic plastics is continued.

EDWARD H. HATTON.

DISCIPLES OF CHRIST. A communion known also as the Churches of Christ and Christian Churches, which sprang from a movement for Christian unity in American Presbyterian circles at the beginning of the 19th century, under Barton W. Stone in Kentucky, and Thomas and Alexander Campbell in Western Pennsylvania. The largest religious body having its origin in America, it ranked fifth among Protestant communions in the United States in 1945. In policy the churches are congregational. There are six major agencies of the communion: The United Christian Missionary Society; Board of Higher Education; Association for the Promotion of Christian Unity; Pension Fund; National Benevolent Association; Board of Church Extension; besides the missionary societies of the several states and provinces of Canada. These agencies are corporations and are affiliated with the International Convention of Disciples of Christ which meets annually. The general missionary work both home and foreign of the churches is administered through The United Christian Missionary Society, with headquarters at 222 Downey Avenue, Indianapolis, Ind. Its board of managers of 120 is composed of sixty men and sixty women. The foreign missionary work in 1945 embraced the Belgian Congo in Africa, China, India, Jamaica, Japan, Mexico, Philippine Islands, Puerto Rico, Argentina, Paraguay and Batang, on the border of Tibet. However, because of the war, work in Japan and the Philippine Islands was suspended.

Statistics of the communion show that during the year there were 4,430 baptisms in the foreign fields. The 317 mission schools had a total enrollment of 13,374. The communion maintained 11 hospitals and 20 dispensaries which gave 653,111 treatments. The Church Extension Fund amounted to \$3,003,955 with outstanding loans to 265 churches. The Pension Fund for the ministry showed assets of \$4,635,793. One hundred young people's conferences were held. Work in America was conducted among the French, "Appalachian Highlanders," European immigrants, Negroes, Orientals, Spanish-Americans, and Mexicans. The National Benevolent Association maintained six homes for children, and an equal number of homes for the aged. In 1945, 28 Colleges, Universities, Bible Colleges and Foundations cooperated with the Board of Higher Education. The total church membership throughout the world in 1945 was 1,943,441; and in the United States and Canada 1,776,878. The Bible school enrolment for the world was 1,113,478, and for the United States and Canada, 1,013,679. Contributions, missionary, benevolence and educational, reported for the fiscal year in the United States and Canada totaled \$8,759,872.

Among the periodicals published by the communion are *World Call*, *The Christian-Evangelist*, *Christian Standard*, and *Front Rank*. The president of the International Convention was Dr. M. E. Sadler, Fort Worth, Texas.

DOGS. A ruling by the Office of Defense Transportation early in the year (rescinded shortly after V-J Day) that shows be limited to local exhibitors greatly curtailed the "traveling" schedule of the

canine stars in 1945. Among the many exhibitions thus ruled off the boards was the big Eastern Club event, which had been held for thirty-three consecutive years at Boston.

However, the indoor classic of dogdom, Westminster Kennel Club's show, was held for the sixty-ninth season and 2,653 entries, representing 102 breeds, were benched in New York's Madison Square Garden.

Shieling's Signature, Scottish terrier owned by Mr. and Mrs. T. H. Snethen of Allison Park, Pa., and shown in the ring by Mr. Snethen, won the coveted best-in-show award in addition to the prize for the best American-bred dog.

Capping the field trial season were the national retriever championships at Shelter Island, N. Y., and Black Magic, a black Labrador bitch owned by Mahlon B. Wallace of St. Louis, captured first honors. Second youngest entrant in the meet, Black Magic of Audlon gave a nearly perfect performance to defeat such strong rivals as Shelter Cove Beauty, the 1944 victor, and Shed of Arden, champion in 1942 and '43.

Of interest to dog lovers last year was the return from the wars of many members of the K-9 Corps, and glowing records of faithfulness and bravery on both the European and Pacific fronts came back with them.

THOMAS V. HANEY.

DOMINICAN REPUBLIC. A republic of the West Indies occupying the eastern part of the island of Hispaniola. Area: 19,332 square miles. Population: 1,969,773 (1944). Capital: Ciudad Trujillo.

Most of the land surface is mountainous, with steep, narrow ranges separated by deep valleys and pocketlike lowlands. There are two principal lowland plains; one between mountain ranges parallel to the north coast, the other along the southern coast. High temperatures prevail in the lowlands throughout the year.

Government. Under the Constitution of 1942, the Dominican Republic is a centralized republic of 15 provinces. It has a bi-cameral legislature: a Senate of 16 members, and a Chamber of Deputies of 38 members. Members serve for 5-year terms. The president is elected for a 5-year term and is assisted by 13 advisers, 8 of whom are ministers. Generalissimo Rafael Leonidas Trujillo Molina was elected President on May 16, 1942, for his third term.

The People. According to the census of 1935, the population is composed of mestizos (71 per cent), Negroes (16 per cent), and whites (13 per cent). Most of the people are concentrated near Santiago and on the southern coastal plain. The chief cities are: Ciudad Trujillo, 80,000; Santiago de los Caballeros, 34,000; and San Pedro de Macoris, 19,000.

Spanish is the official language. Roman Catholicism is the predominant religion.

In 1942 it was estimated 33 per cent of the population was literate. In 1943, there were 1,896 primary schools with a total enrollment of 203,990; and 79 secondary schools with a total of 7,545 students. In 1940 the University of Santo Domingo had 868 students.

National Economy. The economy of the country is almost entirely agricultural. The Dominican Republic ranks fourth among Latin American countries in the production of sugar, its chief crop and most important industry. Production of cacao and coffee are next in importance. Other crops are: corn, mandioca, rice, sweet potatoes, beans, and plantains, grown chiefly for domestic consump-

tion. Yucca is cultivated both for its food value and for the manufacture of starch for export. The 1944-45 coffee crop amounted to about 425,000 bags (of 60 kilograms each); production of sugar for the 1944-45 crop year was 368,892 metric tons; in 1943 cacao production totaled 20,058,835 kilograms.

Processing of agricultural products constitutes the chief manufacturing of the country, which is largely for local consumption. During 1944, however, some exports were made of beer, peanut meal, candles, cigars and cigarettes, sole leather, shoes, hats and furniture.

Foreign Trade. Dominican exports for 1944 totaled \$60,269,328. Sugar and molasses accounted for most of the country's export trade; cacao, coffee and yucca starch made a large part of the remainder. Raw sugar exports in 1944 totaled 749,462 metric tons, most of which went to the United Kingdom. Refined sugar amounting to 5,604 metric tons was exported in that year, the largest buyer being the Netherlands West Indies. In 1944-45 a total of 21,278,578 gallons of molasses were exported; practically all was shipped to the United States. Exports of cacao in 1944 totaled 25,562,120 kilograms, valued at \$3,999,527; exports of chocolate amounted to 186,218 kilograms, valued at \$66,018. The exportable coffee crop for 1944-45 amounted to about 300,000 bags of 60 kilograms. Yucca starch amounting to 12,285,313 kilograms, valued at \$1,659,841, was exported in 1944. The Dominican Republic also exports a variety of fruits, of which oranges are the most important.

Imports into the Dominican Republic in 1944 were valued at \$18,524,575. Manufactured and semi-manufactured products, and raw materials are the principal items imported. Textiles accounted for a good share of 1944 imports.

Events, 1945. In a letter to political leaders on May 30, President Trujillo asked them to reorganize the political parties of the Dominican Republic, which had been dormant since he assumed power in 1930. Two weeks later, reorganization was in progress. Former President Rafael Estrella Urena headed the Republican Party, and former Health Minister Wenceslao Medrano the Independent Labor Party. Five former Cabinet Ministers were organizing a new National Democratic Party. This activity was reported to be in preparation for national elections in May 1947. (Estrella Urena died on Sept. 26 and was succeeded in the Republican leadership by Jafet D. Hernández.)

Dominican political exiles abroad charged that these alleged "opposition" parties were all financed by Trujillo and led by his friends. In March exiled leaders met in Havana and formed a Dominican United Liberation Front, which appealed to the Dominican people to seek freedom. Their attacks on Trujillo were supported in other countries. Former President Eduardo Santos of Colombia and two other prominent Colombian politicians, Luis Cano and Roberto Ordaneta, assailed the Dominican "dictatorship" in a message "to the thinking men of the Americas." And 66 prominent United States citizens urged Trujillo to free imprisoned students and their parents and to grant the opposition the right to campaign for free elections. The Dominican delegation to a World Youth Congress held in London during November was excluded from the meeting after other American delegates had protested that their country was fascist. In September the Dominican United Liberation Front opened a

campaign urging other nations of the hemisphere to exert pressure on Trujillo to call elections.

There were persistent but unconfirmed reports throughout the year of wide-spread arrests and repressive action against a growing opposition movement within the country. These were denied by the Dominican Legation in Venezuela, the country in which most of the rumors originated.

A 1945 budget of \$21,418,133 was approved in January. It included funds for the improvement of Ciudad Trujillo port facilities, building of a cement factory, and construction of a new presidential palace. On April 7 Trujillo revealed a plan to establish an Agricultural and Mortgage Bank. On May 3 Congress authorized the creation of a Cabinet Department of Labor and National Economy, "to coordinate the action of the state with measures depending on private action or cooperation." Early in the fall Trujillo sent to Congress a bill providing for free public instruction in secondary and normal schools. And on Nov. 20 the President asked for a five-million-dollar appropriation to build 25,000 low-cost homes for workers.

It was announced in January that since Trujillo's assumption of power the republic's foreign debt had dropped from \$20,000,000 in 1930 to less than \$12,000,000 at the end of 1944. And the Government had repaid some \$500,000 to the United States under Lend-Lease arrangements.

The outstanding event in the field of foreign affairs was the establishment of diplomatic relations with the Soviet Union, announced on March 12. During the San Francisco Conference of the United Nations, the Dominican Republic and China signed a non-discriminatory immigration agreement. On November 26 the Government reaffirmed its pledge to provide sanctuary for persons persecuted because of race, religion or political beliefs, and the President established a committee to promote and supervise Jewish immigration to the Dominican Republic.

HARRY B. MURKLAND.

DUKE ENDOWMENT. A foundation created by James B. Duke in 1924, known for its connection with Duke University, hospital work, and a number of other activities in the Carolinas. The Endowment is a permanent one with a self-perpetuating board of 15 trustees. Except for the \$17,000,000 spent in erecting and equipping Duke University, it is authorized to expend none of its principal. A report covering its first 16 years, ended Dec. 31, 1944, showed that the Endowment had distributed and allocated \$59,364,343.99 as follows: Duke University, \$33,203,784.06; hospitals, \$17,855,852.03; Davidson College, \$1,420,728.28; Furman University, \$1,419,267.54; Johnson C. Smith University, \$1,009,459.68; orphanages, \$2,305,889.13; superannuated Methodist preachers, \$471,691.50; rural Methodist churches, \$774,213.93 for building and \$903,457.84 for operations. Chairman of the Trustees: George C. Allen. Headquarters: Power Building, Charlotte, N. C.

EARTHQUAKES. The past year was a fortunate one in that there were no destructive earthquakes reported anywhere in the world. The seismological observatories recorded the usual number of earthquakes but these were either sufficiently moderate that little damage resulted or they were located under the sea or in uninhabited regions. Perhaps the most newsworthy earthquake during the year was the one felt in the western Carolinas and northern Georgia on July 26. Despite the severe earthquake at Charleston, S.C., in 1886, this region

is not considered seismically active and the quake there this year was a long succession of relatively moderate shocks.

RICHMOND T. ZOCH.

ECONOMIC FOREIGN POLICY. Executive Committee on. A Committee created by letter of Apr. 5, 1944, from the President to the Department of State and the other interested agencies (listed below). Its function is to examine problems and developments affecting the economic foreign policy of the United States and to formulate recommendations in regard thereto for the consideration of the Secretary of State, and, in appropriate cases, of the President.

The Committee consists of representatives of the Departments of State, the Treasury, Agriculture, Commerce, and Labor, the U. S. Tariff Commission, and the Foreign Economic Administration. Representatives of other departments and agencies are invited to participate when matters of special interest to them are under consideration. Chairman (an officer of the Department of State designated by the Secretary of State): William L. Clayton.

ECUADOR. A republic of South America. Area: National territory, including the Galápagos Islands, and following settlement of the frontier dispute with Peru, is estimated to be 264,880 square kilometers. Population: 3,171,376 (1943). Capital: Quito.

Ecuador is divided into three regions: coastal, sierra or Andean highlands; and Oriente or Amazon region. The climate varies from tropical in the eastern and western lowlands, through temperate in the plateaus, to cold on high mountain peaks.

Government. Ecuador is a centralized republic of 17 provinces. (The Galápagos territory was given provincial status in 1945.) The Constitution of 1945, succeeding the Constitution of 1906, provides for a unicameral legislature, the Chamber of Deputies, composed of 3 deputies for each province having up to 150,000 inhabitants and increasing by 1 deputy for each 75,000 additional inhabitants. Two deputies will be elected by each of the eastern provinces as long as their population is less than 150,000, and the Galápagos Islands will elect 1. There will also be "functional" deputies representing certain business and professional groups. The Congress will meet annually on Aug. 10 for 90 days. Deputies are elected for 2-year periods. The president is elected for a 4-year term. Dr. José María Velasco Ibarra has been President since May 28, 1944.

The People. The people of Ecuador are almost evenly divided between Indians, who live in the Oriente, and those of Spanish and Indian origin who live in the coastal zone. About 4 percent of the population are Negroes, living mostly in the tropical coastal lowlands. The largest cities are: Quito, 165,924; Guayaquil, 172,948; and Cuenca, 52,519.

Spanish is the official language, but Indian dialects are widely spoken and taught in some communities. Roman Catholicism is the predominant religion.

It is estimated that 38 percent of the population is literate. In 1942 there were 3,181 primary schools with a total of 275,046 students, 70 intermediate schools with 11,193 students, and 4 universities with a total enrollment of 1,885.

National Economy. Ecuador is primarily an agricultural country. Rice, cacao, and coffee are the leading crops, but sugar, corn, potatoes, barley, wheat, bananas, and other fruits are also important. Cattle and sheep raising is the leading

pastoral industry. Forest products, including rubber, balsa wood, kapok, and tagua nuts are exported. In 1944, rice production totaled 1,752,217 quintals; cacao production amounted to 294,516 quintals; and the coffee crop totaled 350,000 quintals.

Ecuador's principal mineral products are petroleum, gold, silver, and copper. In 1944 production of crude petroleum rose 25 percent above 1943 and totaled 121,471,895 gallons; refined petroleum products rose 17 percent to 40,371,029 gallons.

There is little manufacturing in Ecuador, textiles making up the leading industry. Shoes, cement, sugar, flour, soap, and candles are produced for the home market, and toquilla (Panama) hats are exported.

Foreign Trade. Ecuadoran exports in 1943 totaled 393,144,000 sucres. Major products exported were: rice, coffee, cacao, rubber, Panama hats, balsa, and bananas. In 1944 crude petroleum exports totaled 251,275 metric tons. The U.S. is the leading market for Ecuador's exports, taking 85 percent of the cacao and 89 percent of the coffee exports in 1943 and 1944. Other important purchasers are Cuba, Peru, Venezuela, and Chile.

Imports in 1943 were valued at 217,982,000 sucres. Principal imports include: foodstuffs, beverages, cotton textiles, pharmaceuticals, machinery, metals and manufactures. In 1943 and 1944 the United States supplied about one-half of Ecuador's total imports. Other leading sources of imports were: Peru, Argentina, Mexico, Great Britain, and Brazil.

Events, 1945. President José María Velasco Ibarra opened the year with a plea for the termination of partisan strife. He lamented his lack of authority "to participate in the legislative function," reviewed the work of his administration during the past seven months despite "disquietude," and declared that increased food production and effective checks on the rising cost of living were the main tasks facing the republic.

The Constituent Assembly, still in session in the early weeks of 1945, was the cause of the President's plea. The Communists, aided by some Socialists, were in effective control of the assembly. By their insistence on passing controversial resolutions, including a bitterly debated press code, which frequently led to disorderly demonstrations and kept the country generally stirred up, the President believed that they were hampering his efforts to solve the country's urgent problems. The quarrel between President and assembly put a heavy strain on the ill-matched coalition of democratic parties which had put Velasco in power in 1944, and late in January it split completely.

Velasco announced that he had accepted the resignations of the Communist Minister of Public Instruction, Alfredo Vera y Vera, and the Socialist Minister of Social Security and Welfare, Alfonso Calderón. Vera and Calderón declared that they had not resigned but had been forced out, and on Jan. 31 the Socialist and Communist Parties announced that they would no longer share "the political and administrative responsibilities of the Government." Velasco filled the Cabinet vacancies with Liberal-Radicals.

The struggle approached a climax on Feb. 8, when Velasco told the Constituent Assembly that he would be forced to resign unless it amended certain provisions it had written into the constitution. A couple of days later, however, he said that he would go on "fighting to the last." De-

fense Minister Carlos Mancheno asserted that the Army would maintain the President in power, and on Feb. 12 the assembly removed from the projected constitution most of the press and radio restrictions which had caused nation-wide adverse comment. There was an immediate easing of tension, and the President seemed to have won an important victory, as leaders of the assembly agreed to make further concessions.

The new Constitution, on which the Constituent Assembly had worked for seven months, and which contained 180 articles, was formally promulgated in an assembly session on Mar. 6. The President had signed the document the day before but had stated publicly: "I signed it against my personal convictions and only to save the country from evil times." And he refused to take a ceremonious oath to the constitution, on the basis that all Ecuadorans were equally bound by it.

The 1945 constitution introduced several important changes in the legislative branch of the Government. It did away with the old bi-cameral legislature and established a unicameral one, made up of members elected directly for a two-year term. Another innovation provided for "functional" as well as elected legislators, to represent special business and professional groups. A Permanent Legislative Committee was created to draft laws and decrees, codify laws, supply information on bills submitted by the President, and pass necessary economic decree-laws when Congress is not in session. Four entirely new and extensive sections of the Constitution were devoted to social, cultural and economic rights and guarantees. To insure full compliance with the constitution and laws pertaining especially to constitutional guarantees, a Tribunal of Constitutional Guarantees, with jurisdiction in all the republic, was established. It was to be composed of three deputies elected by Congress, the Chief Justice of the Supreme Court, a representative of the President, the Attorney General, a representative of the workers, and two citizens elected by Congress.

There was more political excitement on Mar. 9 when the Minister of Government told the assembly that refusal or grant of an amnesty to members of the former regime of Carlos Arroyo del Río would not affect political conditions in the country. The speech touched off a dispute during which shots were fired in the assembly chamber, and members were not able to leave the hall because an excited crowd had gathered outside. The assembly finally granted the President power to give amnesty or pardon to political prisoners or exiles who had no major responsibility for the acts of the Arroyo del Río Administration. After a stormy session lasting through most of Mar. 10, the assembly adjourned early in the morning of Mar. 11.

During the summer there were repercussions in Ecuador as well as Cuba to the rice-sugar barter deal between the two countries. Eduardo Laso, Ecuadoran Minister of National Economy, resigned as a congressional investigating committee held him and his Under Secretary, A. Ortiz responsible for Ecuador's alleged loss of some \$700,000 on the transaction. In a letter to the President, Laso blamed his downfall on merchants who had been "defrauded in their exaggerated ambitions." When a court ordered the arrest of Laso on July 7, Velasco denounced the move as "an incident in a vast demagogic conspiracy to overthrow the Government." Laso was released on July 9, but Ortiz and at least one other official were arrested. The arrests were later invalidated by the Supreme Court. There was also

a controversy over a \$6,500,000 loan made by the Central Bank of Ecuador to the Government to be used for public works. Labor objected to the loan, and the representative of the Confederation of Ecuadoran Workers on the bank's board resigned in protest.

On July 13 Velasco struck back at his extremist enemies. "Leftism, socialism and communism are words for the exploitation of the workers," he declared in a radio address. "Ecuadoran leftism is headed toward failure," he predicted, adding that "speculators, agitators, demagogues, rightists and retired militarists are scheming to trap me into dictatorship." The causes of the unrest which Velasco thus recognized openly were largely economic; chiefly, spiraling food prices; but the President still seemed to have the support of most of the country.

Commander Washington Zabala, retired navy officer, was jailed in Quito on July 24 on charges of conspiring to overthrow the Government.

A year-old personal feud between the conservative Foreign Minister, Camilo Ponce Enriquez, and the leftist Interior Minister, Carlos Guevara Moreno, erupted in a Cabinet crisis late in July. The net result was the elimination of Ponce and the conservative Finance Minister, Mariano Suárez VENTIMILLA from the Government. The crisis began when Guevara refused to join the other Ministers in a vote of confidence in Ponce after his return from the UNCIO at San Francisco, where he headed the Ecuadoran delegation. Ponce thereupon criticized Velasco for keeping Guevara in the Cabinet, assailed the conduct of foreign relations during his absence, and resigned. The rest of the Cabinet went out with him. Velasco settled the dispute by appointing Juan Vicente Trujillo, Ambassador to Brazil, as Foreign Minister and Enrique Arizaga as Finance Minister, and rejecting the resignations of the other Ministers.

On the heels of this dispute came reports of a clash between police and an army battalion stationed in remote Loja. Former President Alberto Enriquez and other retired officers were arrested. There were no further developments.

A general amnesty for all political prisoners and exiles, including members and supporters of the deposed Arroyo del Río regime, was promulgated on Aug. 16. Arroyo del Río, in Colombia, said that he did not plan to return to Ecuador in the near future because of prevailing sentiment there against him.

On Aug. 27, representatives of the Communist, Socialist and Socialist Revolutionary Vanguard Parties met to prepare a base "for the unification of leftist groups," in preparation for forthcoming municipal elections. They reached a basic agreement on joint candidates on Sept. 3.

The police force and mechanized army units were called out late on Nov. 4 when angry citizens of Quito demonstrated against last-minute postponement of municipal elections by the National Election Board which claimed that its organization and supplies were not ready.

The elections were finally held on Nov. 25 and resulted in sweeping Conservative victories. The Conservatives won an eight to three majority in the voting for a municipal council in Quito, and the Conservative leader, Jacinto Jijón y Caamaño was chosen mayor. The real battle was between Conservatives and Socialists. The middle-of-the-road Liberal-Radicals failed to poll as much as ten percent of the Conservative vote. The immediate effect of the upset was a change in the attitude of the

Socialists, who reorganized their party and began moving toward a coalition with the Liberal-Radicals and other center elements. The Rightist victory also swung Conservative support toward Velasco; the Conservatives apparently reasoned that their best chance of continuing to gain lay in the maintenance of a stable constitutional order.

The Leftist defeat in the municipal elections seemed also to have an effect on a special session of Congress called in December to consider such international matters as the United Nations Charter and the Bretton Woods Agreements. Velasco supporters had feared that it might get out of hand, but it confined itself strictly to the agenda and adjourned smoothly.

Echoes of the old days of dollar diplomacy were heard in Quito in December. The Ecuadoran Government charged that the Ambursen Engineering Corp. of New York had tried to finance a revolution. Spencer W. Stewart, secretary and Quito representative of Ambursen, was ordered to leave the country and the company's operations were shut down.

According to the Government, the company was unable to complete a highway between Quevedo and Manta, on which it had already spent 28,000,000 sucres (about \$1,960,000) of Export-Import Bank funds. So it offered to put up \$80,000 to overthrow the Government and tried to persuade other United States firms to join it. One of them revealed the plot.

Other Foreign Relations. On authorization of the Constituent Assembly, the Foreign Ministry on Feb. 2 informed the other American republics that Ecuador regarded itself as having been at war with Japan since Dec. 7, 1941.

On Mar. 31 British Foreign Secretary Anthony Eden told the press that the United Kingdom "considers that it has the right to ask that a date be fixed on which the Ecuadoran Government will take the necessary steps with reference to her external debt." Some \$16,000,000 in Ecuadoran foreign bonds had been in default since 1929.

Final completion of the Ecuadoran-Peruvian frontier settlement was formally observed on July 14 in Rio de Janeiro.

HARRY B. MURKLAND.

EDUCATION. The most conspicuous developments in American education during the year 1945 were at the higher levels, in the colleges and universities and in the field of scientific research. This is not to say that the lower schools were unaffected by the new interest which the whole population of the country has taken in international and national social and economic problems. Teachers in high schools and elementary schools have turned the attention of their pupils more than they ever did before to the nations of the world, especially to those of South America and to Russia and China. The subject of geography has expanded to include instruction with regard to parts of the world which were formerly passed over lightly, such as the Orient and the Pacific. New kinds of maps are in use supplementing the familiar Mercator projection maps. Pupils in the grades as low as the fifth and sixth have acquired an acquaintance with the technical facts of aviation. Their knowledge about airplanes has been supplied in some measure through magazines and newspapers and in some measure through the nation-wide campaign carried on by Air-Age Education Research, an agency which is fostered and maintained by the American Airlines, Inc.

It is in the colleges and universities, however,

that steps are being taken of such a radical character and in such numbers as to constitute a veritable revolution. Some of these steps are easily explained as directly due to the highly successful educational programs of the Army and Navy. Some were tentatively advocated before the war but have rapidly reached the stage of effective consummation now that institutions of higher education are once more filling up with students after four years during which enrolments had shrunk to the point that threatened the continued existence of many institutions.

Under the title "A Survey Reveals Army and Navy Influence on the Nation's College Programs" the *New York Times* reported the changes which are being made in twenty-one "representative institutions of higher learning in various parts of the country." Some paragraphs from the report of this survey may be quoted.

Among the most important of the changes brought into the classroom by the Army and Navy, the survey discloses, are these: (1) Modified way of teaching foreign languages; (2) increased use of visual aids; (3) more emphasis upon science and technical subjects; (4) greater stress on physical education; (5) greater flexibility in the use of faculty members in subjects outside their own field of specialization.

There are numerous other changes and modifications, of course. Some institutions, for example, are revising their lecture system as a result of the work done by the Army with small group discussions. Others report that they have added special courses, to be a permanent part of the curriculum.

Of the major wartime changes, perhaps that in the teaching of foreign languages is the most striking. Although subject to considerable criticism as well as praise, the Army method of teaching languages has, with variations, been accepted by almost all of the institutions polled.

Typical of what is noted elsewhere is the program at Yale University. Here all beginning courses in modern languages are now being taught by the intensive method similar to that used in the Army training programs. Under this method, ten hours weekly are devoted to classes in the language selected by the student, eight hours confined to oral practice.

Recording machines, used extensively at Yale in the teaching of Chinese to trainees in the Army Military Intelligence School, have been found to be so effective that other language departments—German, Spanish, French and Russian—are considering using them. The far-reaching consequences of the use of these machines can be measured when it is revealed that seven instructors, known as "informants," with the mechanical devices, now train 150 men, whereas thirteen teachers, without machines, were formerly required to instruct thirty men.

At another institution somewhat distant from Yale—the University of Nebraska—the language program has likewise been modified as a result of Army experience. The traditional lecture-reading system has been revised to include two-hour laboratory periods in which students hear the spoken language; sound films and recordings have been introduced to supplement classroom instruction.

Further evidence of the impression produced by the success of the armed forces in their conduct of instruction is to be seen in the fact that a commission has been organized to make a two-year study of what colleges and schools can learn from the experiences of the Army and Navy. The Carnegie Corporation and the General Education Board have provided a fund of \$150,000 for the study. Alonzo G. Grace, Commissioner of Education of the state of Connecticut, with a staff of educators and laymen will examine the curriculums and methods of teaching which have been employed and attempt to discover what phases of the program of the armed forces should be adopted in civilian institutions.

During the war more than ten million men and women were trained by the Army and Navy in a great variety of lines. Many of those who were thus trained had earlier attended high schools and colleges. These former students in educational institutions found that the most striking characteristics

of the training given by the armed forces were its definiteness and concreteness. Visual instruction, the use of films and charts, was carried far beyond anything heretofore attempted in any branch of the educational system. Visual instruction has demonstrated to the soldiers and sailors the value of this supplement to verbal training. Of course, the military forces had resources which the ordinary educational institution did not command for the production of concrete visual materials. From the point of view of instructional technique it can be said that the war made possible demonstration on an unprecedented scale of the importance of such materials. The schools will perhaps be able to secure the resources to take advantage in times of peace of the demonstration which has thus been given.

Quite apart from the example of the Army and Navy are certain forces and tendencies which have been operating in higher education for a long time and are now taking effective form in new plans and practices for the reorganization of both the contents and the methods of college teaching. College faculties have in a number of cases issued elaborate reports. Some of these are based on investigations which began before the war but are now resulting in more or less complete reorganizations of college education. It is, of course, impossible in a limited discussion to review all, or even any considerable number, of these reports. The best that can be done is to center on one of the most important and make the account of this one report the vehicle for generalizations which issue from the whole collection.

Harvard University has published in a book of 267 pages entitled *General Education in a Free Society* an elaborate statement of the present trends in education and recommendations for the reorganization of Harvard College. Most of the recommendations have already been adopted by the faculty.

The first generalization is clearly indicated in the title of the Harvard report. General education appropriate to the present-day world is the kind of education toward which, in one way or another, all the college reports point. The kind of higher educational program which originated in Europe when the nations emerging from the Dark Ages looked to the example of Greece and Rome to save them from barbarism is now recognized as outmoded. The day of the classical curriculum is gone. Even Harvard is willing to have the study of ancient languages take second or third place. In fact, the Harvard report frankly states that the chief justification of any study of a classical language is for the purpose of equipping the student to understand and properly employ his vernacular. The term "liberal education" is deliberately abandoned because of its ambiguity and historical implications. The term "general education" is regarded as defining more adequately what is aimed at. General education includes as an important two-thirds of its contents natural and social sciences. The other third is, indeed, to be devoted to literary subjects, but among these English is far and away the dominant section.

The second generalization is that the free elective system is now recognized as deficient in that it does not guarantee to educated individuals any common body of experience, which is essential to the creation of a unified society of like-minded citizens. Harvard is called upon by its reporting committee to devote six of the sixteen units required for graduation to a group of courses which every student will be required to take. These re-

quired courses are in the three general fields mentioned in the preceding paragraph, namely natural science, social science, and humanities. It is recommended that two of the six required courses be taken in the first year and at least one more in the sophomore year. Beyond the six required courses there is some latitude of choice, but even in the fields of specialization allowed to individual students far more work is explicitly prescribed than was required in the days of the free elective system.

The devotion of the first two years of college to broad general education is, of course, no new plan. The University of Chicago has led the way by awarding the degree which stands for general education at the end of the second year. Yale has long had its freshman faculty and special freshman program. Most of the institutions of higher education employ the last two years for specialization in contrast with the first two years of general education. The remarkable fact is that the trend has now become so definite that it is accepted by Harvard, the original home of the extreme elective plan of education.

The third generalization, which follows naturally from the second, is that the college recognizes its very close connection with the secondary school as a copartner in general education. The reader of the Harvard report is impressed by the introductory chapter of the report, which recounts the growth of the free public high school. The material in this chapter is not new, but it shows that a broad general education is no longer to be thought of as the exclusive privilege of a small selected group.

The reader of the Harvard report is also impressed by the fact that the longest and by all odds the most penetrating discussion of the curriculum of general education is the sixty-page description of the courses which the Harvard committee regards as the appropriate fields of instruction for the secondary schools. These fields of secondary education are described in such detail that, when it comes to a description of the proposed required college courses in the same fields, it has seemed to the committee undesirable to give more than the barest outline of the college courses.

It can be shown that this tendency to recognize secondary education as part of the emerging plan of general education is accepted by institutions other than Harvard by referring to the Yale program. At Yale students who have completed in secondary schools some of the studies that are required are excused from repeating them in college. The dean of Yale expresses an ardent desire for the cultivation of closer relations between his institution and the secondary schools.

The University of Chicago has gone further than the conservative New England institutions. Chicago has acted on its conviction that the secondary school can and does lay the broad foundation of general education. Secondary schools and the first two years of college have been completely integrated.

The fourth generalization, one that is confirmed by the Yale plan and other well-known programs which are subjects of wide discussion, is that independent reading of the major writings of all ages is an indispensable part of general education. Harvard is going to have a course in "Great Books." Yale is going to require its students to read assigned books during the summer vacation and stand examination on the readings in the fall. The University of Chicago and St. John's College have for some years led the movement for such a course in the college curriculum.

There are other generalizations that issue from

a reading of the reports from Harvard, Yale, and a large number of other institutions of higher education, but some of these can better be discussed apart from the reforms which are being made in college programs. These additional generalizations relate to the sciences and their place in American education.

Apparently final determination of the status of science in educational institutions will come from Congress. That body now has before it a number of bills which, if passed, will be influential in promoting the study of the sciences. Senator Thomas of Utah is sponsor for a bill which declares that there is a "widespread lack of opportunity for youth enrolled in public secondary schools to receive effective instruction in natural science subjects." The bill proposes the appropriation of sums beginning with \$4,000,000 in 1945 and rising to \$20,000,000 in 1951 to help states pay the salaries of supervisors and teachers of natural sciences and the cost of supplies and equipment.

A more general attack on the whole problem was proposed some years ago by Senator Kilgore. He introduced a bill which in its revised form is now before Congress. This bill provides for the establishment of a federal foundation to distribute money in the postwar period to universities and other non-profit agencies to encourage scientific research related to national defense, health, housing, consumer problems, and other areas of public interest.

The main concern of Congress at the present time centers on bills which have been introduced in response to an elaborate report entitled *Science, the Endless Frontier*. This report was prepared at the request of President Roosevelt by Dr. Vannevar Bush, director of the Office of Scientific Research and Development. The agency of which Dr. Bush is director had charge during the war of organizing various scientific research projects.

Dr. Bush's report advocates a large annual federal appropriation to be administered by a federal foundation in promoting research in the natural sciences. It also recommends 6,000 four-year scholarships for candidates for the bachelor's degree and 300 three-year fellowships for candidates for the doctor's degree.

The chief emphasis in the bills proposing subsidies is on the natural sciences. The social sciences are, however, not overlooked. Medical research with its bearing on human welfare is frequently mentioned as a subject in which the federal foundation should interest itself. Consumer education and housing are also commonly included when fields of research are described.

Social science is, however, not recognized as equally urgent with natural science although it is included among required courses in educational institutions more generally than formerly. Whether encouragement to students in the form of scholarships and fellowships in the social sciences will in due time be forthcoming remains to be seen. All that can be said at present is that attention to human interests is steadily gaining ground. It is difficult to believe that the race for technological achievement can long outrun attainment of social adjustments based on fundamental research.

An educational program of a wholly different character from those discussed up to this point is before Congress and has aroused vigorous discussion throughout the nation. This is a program for one year of compulsory military training of all youth between the ages of eighteen and twenty-two. President Roosevelt recommended such a period of compulsory training. President Truman

has urged its adoption. Military leaders say that it is essential to the safety of the United States. On the other hand, educators are for the most part opposed, and widespread uncertainty exists as to the wisdom of such a program. It is often said that military necessity does not call for such action. Above all, it is urged that the Army is not the proper agency for the administration of a program of training of youth.

Various compromise measures have been suggested which would emphasize more than a law providing for compulsory military training the desirability of demanding of youth a year of devotion to public service.

Neither the military authorities nor those who are opposed to their demands for a year of compulsory military training have ever given a clear account of just what they would do with youth during a year if they were entrusted with the administration of the program. The question is fundamentally one of skepticism with regard to the ability of either educators or military leaders to render acceptable service to the nation in the upbringing of youth.

While the United States is engaged in finding solutions for its domestic educational problems it is confronted with the necessity of taking some kind of action with respect to education in other countries. Certain negative policies in the conquered countries of the Axis have been definitely adopted. It has been decided that references to Fascism in Italian textbooks must be eliminated. So must also Nazi doctrines from German textbooks. General MacArthur has issued an edict that Shintoism is no longer to have the support of the Japanese government. This edict requires a revision of the official instruction which up to the end of the war was administered to all Japanese pupils.

It is the positive hope of Americans that the conquered nations will insert in place of the deleted teachings some kind of materials which will stimulate interest in, and final acceptance of, democracy. The negative side of the educational program is easier to enforce than the positive side. Even if some success in cutting out undesirable reading materials is achieved, the problems of retraining teachers remain and will require time and wisdom for their solution.

In the meantime, England and France have recently announced greatly extended programs of advanced education for adolescents. These moves show that the impact of the war has tended to break down the class system, which has heretofore largely kept the doors of the upper schools closed to the sons and daughters of the common people.

One of the most hopeful achievements in the field of education is the establishment by representatives of the United Nations of an organization which is to function as an international office of education.

When the San Francisco conference assembled, there was no provision in the agenda for consideration of world education. By the exercise of all the influence which educators could bring to bear on that conference success was finally achieved in having inserted in the Charter provision for a branch of the United Nations Organization to deal with education and cultural relations.

During the past three years several unofficial conferences have been held in this country of representatives of a number of nations who joined in promoting a plan for some kind of international educational organization. A conference was held in London during the summer of 1945 of ministers of education from some of the leading nations with a

similar purpose. This conference drafted a proposal looking to the organization of an international office of education.

Finally, on Nov. 1, 1945, a formal government-sponsored assembly of delegates from forty-four nations opened its sessions in London with the purpose of drafting a charter to be submitted to the United Nations.

Prime Minister Attlee, in his opening address to the delegates, stressed the contributions which an international educational assembly can make to world understanding and world peace. Miss Ellen Wilkinson, British Minister of Education, was elected president; M. Blum, the chief of the French delegation, was elected associate president, as was also Archibald MacLeish, head of the delegation from the United States. Russia was not represented.

The first sessions were devoted to reports from delegates of the various countries. The educational conditions in the countries overrun during the war are deplorable in the extreme. One of the early functions of the new educational organization will be to render such aid as is possible in restoring school buildings and equipment.

On Nov. 15, without a dissenting vote, a constitution drafted by a committee headed by Archibald MacLeish of the United States was accepted. It will be submitted to the members of the United Nations and will be in effect when adopted by twenty of the nations.

The new organization will be made up of a General Conference, an Executive Board, and a Secretariat. Each country is to have five delegates to the Conference and one vote. The Executive Board will consist of eighteen members. The Secretariat will have a director general and a staff.

To preserve the independence of the nations the educational body is prohibited from intervening in matters "which are essentially within their domestic jurisdiction."

In its preamble the constitution warns that the peace will fail unless it is founded upon the "intellectual and moral solidarity of mankind." The member nations promise in the Charter to increase the means of communication between their peoples and to employ these means for the purposes of mutual understanding and "a truer and more perfect knowledge of each other's lives."

"The purpose of the organization is to contribute to peace and security by promoting collaboration among the nations through education, science and culture in order to further universal respect for justice, for the rule of law and for the human rights and fundamental freedoms which are affirmed for the peoples of the world without distinction of race, sex, language or religion by the Charter of the United Nations."

Each member nation will be required to report periodically to the organization on its laws, regulations, and statistics relating to educational, scientific, and cultural life and institutions.

An Interim Commission was created and is continuing in session in London. This consists of a representative of each of the United Nations that signed the Charter. An Executive Committee of fifteen members of the Interim Commission is to be appointed to prepare the agenda for the first session of the General Conference, scheduled tentatively for early next fall in Paris.

A resolution, introduced by France and seconded by Yugoslavia, called upon the conference to send all documents relating to its work to members of the United Nations who were not at the sessions. The delegates are hopeful that the Soviet government will join the Interim Commission.

The use of the press, radio, and motion pictures for the spread of knowledge and mutual understanding among the peoples of the world was recommended in a clause adopted by the conference on motion of the United States. Another amendment fostered by the United States asked for close working relationships with adult-education agencies.

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EDUCATION, U. S. Office of. During 1945 the U. S. Office of Education sought in many way to provide effective leadership and assistance to the schools and colleges.

General Services. The Office cooperated with other governmental agencies in a variety of special war services including the development of plans for keeping youth in school; provision of school services in war areas under the Lanham Act; maintenance of essential school transportation; utilization and disposal of surplus property for educational use; participation of schools in the salvage drive; making available to schools operating supplies, textbooks, and essential maintenance materials upon which wartime restrictions had been placed; school lunches; programs of health and physical education; and the development of a sound approach in the field of social hygiene.

Consideration was given to the adaptation of school programs and services. Special attention was paid to programs for exceptional children, Negroes, Spanish-speaking groups, children of migrants, and rural youth; reorganization of administrative units and school programs to meet postwar needs; promotion of interest in school progress through civic and club discussion groups; nutritional problems on the elementary school level, and improving the dental health of high school pupils. Studies were made of school building needs, expenditures for education, wartime legislation affecting education, child accounting and compulsory school attendance, use of cumulative records, juvenile delinquency and the schools, visiting teacher work, certification of school social workers, motivation in health education, supplying textbooks and other instructional materials at public expense, pupil personnel services, and recreation services for children and youth.

The basic statistical data concerning education in the United States continued to be collected and compiled by the U. S. Office of Education during 1945, together with special studies undertaken to meet requests from other Government agencies and the general public. Data included studies of the effect of the war on school enrollments, on land-grant colleges, on college income and expenditures, and on expenditures per pupil in city-school systems. (See SCHOOLS; UNIVERSITIES.)

Elementary Education. Elementary education activities were centered on instructional problems, frequently through conferences, workshops, or committee group effort. Bibliographies of courses of study and a guide to developing a unit of work were prepared. Special attention was given to broadening the school curriculum, such as nutrition education, for which a cooperative follow-up report was issued; fire safety, which involved a working conference and the preparation of a curriculum guide; conservation education; teaching about Latin America; and intercultural education. Cooperation with the informal organization of State elementary school supervisors, begun several years ago, was actively continued.

Wartime concern for the school care of children below school age increased the number of inquiries

with respect to legislation, and to initiating, organizing, equipping, and safeguarding standards for nursery schools and kindergartens. Materials in this field, including a study of schools for children under six, were prepared.

The Office continued to promote nursery schools and school-age centers for children of working mothers. At the same time resources were available to assist State departments and local schools in incorporating these services, including parent education, into the school framework.

The work for exceptional children has been marked by cooperative projects. Upon request of Georgia authorities the Office had an active part in making a survey of the Georgia School for the Deaf. In cooperation with the National Association of Training Schools, a study was issued of educational programs in training schools for delinquent youth. In cooperation with a group of curriculum and guidance specialists a study was completed of curriculum adjustments for gifted and talented children. At the request of the representative for China on the UNRRA Council, recommendations were submitted for centers for handicapped children in China.

The Office has attempted in a variety of ways over the past several years to secure joint planning by educators and social workers, to the end that school children in trouble will secure the special assistance they need. The past year has seen encouraging developments in this line through a working conference called by the Office of national leaders in education and in social work, and subsequent reports and studies of visiting teacher services. Efforts were continued also in the field of school recreation.

Secondary Education. Activities in secondary education were concerned largely with problems related to wartime conditions. As some of these problems were in the fields of interest of other Government agencies, a few joint studies were undertaken. The Children's Bureau and the Office of Education jointly sponsored a nation-wide Back-to-School Drive, in an attempt to stem the tide of rapidly decreasing high school enrollments and rapidly increasing employment of youth fourteen through seventeen years of age. Factual information and suggestions for action programs by schools and employer and employee-organizations were prepared and widely distributed. Also in cooperation with the Children's Bureau was undertaken a study of school-work programs, other than vocational, designed to give students opportunities for part-time work along with school attendance. It is the purpose of the study to ascertain desirable and successful features of such programs, together with other facts valuable for guidance in similar future arrangements. About a dozen school systems were visited for detailed study, and from approximately 300, information was secured by correspondence. A report is in preparation.

The Office took the initiative in calling meetings of Federal agencies whose programs relate to the health of school-age children. At these meetings information was exchanged, needs studied, and recommendations for cooperation formulated. As a result, a report was produced on child health. During the year an Inter-Agency Coordinating Committee was created to formulate policies and coordinate existing programs in health and physical fitness.

In recognition of the need for expanded school services for youth of secondary school age and the years immediately following, the Office prepared a mimeographed document which attempted ten-

tatively, to (1) identify major problems involved, (2) present illustrative questions and data, and (3) propose some principles for action. This was sent to selected leaders in secondary education to promote general discussion and also to elicit suggestions for the improvement of the document, which is now being revised for publication.

A study of State plans for granting high school credit for study and experience outside of school was initiated. Such plans involve (1) examinations and (2) evaluations of work programs and study courses pursued. Also under way is a study of the value of certain tests, developed by the War Department, for guidance in secondary education. Selected tests have been given in five school systems and an analysis is being made of the prognostic value of each test for various high school subjects.

Higher Education. The Division of Higher Education compiled and published a bulletin under the title *Higher Education Looks Ahead* containing accounts of important changes made in colleges and universities in their efforts to adjust to the post-war demands of veterans, returning war workers, and regular high school graduates; through correspondence and interviews, counseled veterans and returning war workers concerning colleges and universities best adapted to their needs; conferred with veterans and former war workers concerning postwar jobs; supplied the Veterans Administration, War Department, Navy Department, and other government agencies with information concerning colleges and universities; participated in developing plans for making surplus war property available to colleges and universities at price discounts; terminated the Engineering, Science, and Management War Training Program as of June 30, 1945, secured the final reports from the more than 200 participating colleges and universities, and carried out a program of liquidating the program in cooperation with the General Accounting Office; continued collections on the loans to approximately 10,000 students who had been recipients of Student War Loans; cooperated with the Statistical Division in securing current information concerning enrollments, income, and expenditures in the 1,700 colleges and universities; published five bulletins, (1) *Data for State-wide Planning of Veterans' Education*, (2) *Educational Directory of Colleges and Universities*, (3) *Accredited Higher Institutions, 1944*, (4) *Offerings in the Fields of Guidance and Personnel Work in Colleges and Universities*, and (5) *Higher Education Looks Ahead*; prepared a manuscript for publication under the title, *Vocational Education of College Grade*, which carries a description of important less-than-degree level vocational curricula maintained by colleges and universities; administered the \$5,030,000 supplementary Morrill funds, and began a study in cooperation with the Association of Land-Grant Colleges and Universities of short intensive curricula maintained at the 69 land-grant colleges and universities; participated in surveys of higher education in Mississippi and South Carolina; published semi-monthly the 12-page periodical *Higher Education*; and participated in increasing numbers of conferences and handled increasing flow of correspondence dealing with questions in the field of higher education.

International Educational Relations. The Division of International Educational Relations was organized in the U.S. Office of Education during 1945, combining the staffs and the functions in the field of comparative education and inter-American educational relations.

Work during the year included field trips of educational specialists to make basic studies of systems in Latin America; administration of fellowships and professorships under the Buenos Aires Convention; arranging intern training for teachers and students from the other American Republics, China, Philippine Islands, Afghanistan and India; recommending U.S. teachers for employment in Central and South America and the Near East; promotion of the study of Spanish, Portuguese and English; preparation and exchange of materials on education; promoting better understanding in the U.S. of the peoples of the Far East through conferences, lectures, and the preparation of curriculum materials for use by teachers; supplying information on education abroad to students of comparative education and others; supplying teaching materials on Latin America including loan packets, exhibits, kodachrome slides and free publications; assistance to teacher education institutions and inter-American demonstration centers to aid in introducing improved materials and teaching techniques; and provision of consultants and speakers for workshops, institutes and conferences throughout the United States.

Vocational Education. The Vocational Division of the U.S. Office of Education administered the provisions of the Smith-Hughes and George-Deen Acts for the promotion of vocational education in the States in the fields of agriculture, trades and industry, home economics, distributive occupations, and occupational information and guidance for which funds are allotted to the States on a matching basis by Congressional appropriation.

In addition to its regular services, the Vocational Agriculture Service maintained cooperation with State Boards for Vocational Education in administration of the Food Production War Training Program. More than 4,188,450 enrollments were reported in shop, farm machinery repair, labor training, food production, and food processing courses. The program, discontinued May 31, 1945, was followed by the Special-Grant Food Processing Program completed Dec. 31, 1945, in which approximately 550,000 persons were enrolled.

The Vocational Home Economics Service promoted the federally-aided program in the States. Special emphasis was given toward assisting States in making curriculum adjustments for war and post-war periods, in community organization for home and family life education, and for expanding home-making education programs for adults. Attention was given through conferences and field service to programs in nutrition, food production and conservation, school lunches, improvement of family health, and consumer education.

The Trade and Industrial Education Service further assisted States in promotion and development of trade preparatory programs for youth, part-time trade extension classes, evening industrial classes for employed men and women, and supervisory training. This Service also cooperated with the States in the operation of the Vocational Training for War Production Workers Program.

The Business Education Service assisted the States in the promotion and development of the federally-aided program of distributive education, including programs of training designed to help retail business executives and managers meet shortages of trained and experienced store workers. Attention was given to assisting States to organize and administer pre-employment replacement training programs, wartime training programs for experienced distributive workers, and supervisory training for store managerial personnel.

The Occupational Information and Guidance Service gave assistance in solving problems involving these factors, met requests for field service from the States, and provided guidance service for returning veterans and dislocated war workers. Assistance was given in the development of counselor training and the organization of community adult counseling service; also to governmental and civilian agencies in formulating policies relating to occupational information and guidance.

War Production Training Programs. The Vocational Division terminated the Vocational Training for War Production Workers Program and the Food Production War Training Program, conducted in cooperation with State boards for vocational education. The war production training programs began in 1940, under administration of the Trade and Industrial and the Agricultural Education Services. During the five years of operation, net payments to the States for Vocational Training of War Production Workers approximated \$298,266,300; those for the Food Production Program, approximated \$49,029,200. The Federal funds allotted were for cost of courses and acquisition of equipment.

The Vocational Training for War Production Workers Program began July 1, 1940. Existing vocational training facilities in public schools were used to train workers for war industries. As training needs increased, additional facilities were provided from Federal funds.

With the closing of all courses on June 30, 1945, this program came to an end. From the beginning of the program, July 1, 1940, through the closing date, June 30, 1945, there were 7,469,506 enrollments in both the pre-employment and supplementary courses. Of this total, 2,667,449 were in the pre-employment program which terminated on May 31, 1945, and 4,802,057 enrollments in supplementary courses.

Women trainees in supplementary courses totalled 946,731 or 19.7 percent of those trained from the beginning of the program. Negro trainees totalled 157,471 or 3.3 percent of all persons enrolled. Since Jan. 1, 1944, 15,830 veterans of World War II were trained in supplementary courses.

The Food Production War Training Program began Oct. 9, 1940. Repair, operation, and construction of farm machinery and equipment; production, conservation, and processing of food for family use were some of the activities carried on in this program.

All courses in this program were officially terminated May 31, 1945. From the program's beginning through the closing date, 4,188,552 enrollments were reported, divided as follows: Food processing courses, 1,514,093; farm machinery courses, 1,215,939; shop courses, 820,058; food production courses, 534,138; and training farm workers courses, 104,324.

Almost one-third of all enrollments reported since the beginning of the program were women, a total of 1,366,570. Negro enrollments reported were 771,203 or 18.4 percent of the total; 402,114 enrollments were from urban communities (2,500 population or over), or 9.6 percent of the total; and 85,235 were in-school enrollments, or 2.0 percent of the total.

A special work grant of Federal funds, of which approximately \$1,587,900 was sent to the States, provided for the continuation beyond June 30, 1945, of the food processing courses carried on in the Food Production Program. On the basis of data received for the first four months of the program

it is estimated that 550,000 enrolled in the courses. This program began on July 1, 1945, and terminated Dec. 31, 1945.

School Administration. Services relating to the war were rendered throughout the year, school transportation and school facilities for pupils in areas affected by war activities receiving major attention. Cooperation with State departments of education and educational institutions, in anticipation of the disposal of surplus war property which schools could use, was also given.

State and national legislative activity was particularly heavy during the year, resulting in many queries to the Office on pending legislation. Requests were also received for the preparation of articles for educational and law journals relating to the important features of satisfactory school codes and plans for school administrative organization, buildings, finance, and transportation.

Staff members participated in such committee work as that of developing school furniture types and standards, formulating proposals for the utilization of surplus war property for schools, and outlining problems for study by the National Council of Chief State School Officers. Members of the staff also directed or participated in many conferences throughout the country on school administration. Such conferences took place in Washington, D. C.; Lafayette, Ind.; Baltimore, Md.; New York, N. Y.; Philadelphia, Pa.; Nashville, Tenn.; Williamsburg, Va.; Birmingham, Ala.; Sacramento, Calif.; Denver, Colo.; Atlanta, Ga.; Boston, Mass.; St. Louis, Mo.; and St. Paul, Minn.

Studies relating to school administration which were completed and published during the year are *Leaflet No. 76, Federal Government expenditures for education, 1943-44*; *Good Reference Bibliography No. 75, School finance*; and *Good Reference Bibliography No. 76, The local board of education*. Among those in progress, but not completed during the year are *State plans for financing education*; *Legal provisions affecting the international exchange of teachers*; *Summary of legislation affecting education* enacted by the 79th Congress, First session; *Codification and improvement of State laws relating to education*; *Planning the school plant*; and *A study of pupil transportation* covering State and local responsibility, legal basis, financing, records and reports, selection and training of school bus drivers, standards, ownership, insurance, bus maintenance, and purchasing procedures for bus equipment and supplies.

An important service was the correspondence and personal interviews with State and local school officials, representatives of Federal Government agencies, and various officials of national and State associations. Such service includes the furnishing of information on every phase of school administration.

Auxiliary Services. The Division of Visual Aids for War Training, according to Congressional directions, completed the visual aids production program and continued the distribution of these visual units to schools and industry.

The total production program consisted of 457 sound motion pictures, 432 silent filmstrips accompanying individual motion pictures, and 457 instructor's manuals; 632 of these films and filmstrips were completed during the fiscal year ending June 30, 1945.

Subject areas covered by series of visual aids units include machine shop, aircraft, shipbuilding, precision wood machining, engineering, electrical problems in supervision, nursing, foundry practice, refrigeration service, farm work, welding proce-

dures, plastics, optical craftsmanship, and automotive operation and maintenance.

Services to Libraries. The Libraries Section concerned itself with the development of adequate public, school, college, university, and special library services under wartime conditions. Among its activities were consultative services to State agencies on the planning of library programs, on in-service training institutes for librarians, and on the layout and equipment of school and other libraries. Through *Education for Victory*, bi-weekly periodical of the Office, the section kept libraries informed concerning significant wartime library projects and pertinent Government documents. It administered a nation-wide project of circulating exhibits of teaching materials on Latin America. The section also cooperated with other Federal agencies in their programs which required library facilities, and it generally made available the basic facts regarding the services, resources, and finances of all types of libraries.

Educational Uses of Radio. The Radio Unit was active in further stimulation of interest among school administrators and teachers in the frequencies reserved exclusively for non-commercial educational broadcasting. Requested information or advice ranged all the way from simply giving information as to where factual materials could be found, to the preparation of suggested plans for the organization of school radio broadcasts. Under joint sponsorship with the Office of Education, two FM Institutes were offered for the first time during the summer at the University of Wisconsin and at Ohio State University, for studying all the problems involved from the time an application for license is considered through the various stages of engineering, programming and utilization.

Approximately 170 new scripts were accepted during the year for circulation on free loan through the Script and Transcription Exchange. A revised catalog, listing nearly 1,100 scripts is in process of printing. Likewise, an additional 25 new transcriptions, dealing with timely postwar problems, have been added to the library for free circulation. During the year over 9,000 scripts and 2,891 transcriptions were circulated.

A new *Radio Bibliography*, published in October, 1945, lists some 300 books, pamphlets and periodicals of particular use to those interested in educational radio.

Services for the Blind. The Services for the Blind was created in the U. S. Office of Education following the passage of the Randolph-Sheppard Act. The Act was designed to improve the economic condition of blind persons, authorize them to operate vending stands in Federal and other buildings, and provide for the making of surveys of industries to obtain information that will assist blind persons to obtain employment.

There are now forty-four State agencies designated by the U.S. Commissioner of Education to issue licenses to blind persons to operate vending stands in Federal and other buildings. Three hundred and forty-two stands are in operation in Federal buildings throughout the country, fifty-four of which are in the District of Columbia. In addition to the stands in Federal buildings, there are approximately six hundred and twenty-five being operated in State, county, municipal and private buildings which have been established largely as a result of the impetus given by the Randolph-Sheppard Act. The vending stands outside of the District of Columbia have an average yearly net income of approximately \$1,650 and those in the District average more than \$3,200.

In addition the Services also assists States in making surveys of industries, and aids in the training of personnel in the techniques of placing blind persons. During the War it is estimated that over four thousand blind persons were employed in industries, and their production in most cases was equal to or beyond that of their sighted associates.

U. S. Office of Education Library. The activities of the Library continued to be war centered and directed toward serving its clientele of Education specialists, specialists in other government agencies, and persons carrying on research throughout the country. In addition to maintenance of adequate collections in the usual fields of interest, emphasis was placed on the acquisition of materials on postwar planning, education of returning veterans, war training programs, and other war related subjects.

Bibliographical services included the collection of data on theses, dissertations and research studies for eventual publication in the *Bibliography of Research Studies in Education*; preparation of bibliographies on *Planning for Postwar Education in the United States*, and *Compulsory Military Training*; preparation of annotated lists of new books and pamphlets for *Education for Victory*, and annotation of Office of Education publications for the Library of Congress bibliography, *Postwar Problems*. In addition more than fifty special lists of materials on various subjects were prepared in answer to requests from individuals and institutions.

Approximately 10,000 volumes were added during the year, increasing the number of items held to more than 320,000. The following statistics indicate the extent of the Library's services: attendance, 8200; books loaned to individuals for outside use, 9960; books used in the reading room, 26,100; requests for information by telephone, 7,100; books loaned to other libraries, 3,200.

Information and Publications. Mailing lists containing the names of educational institutions, associations, libraries, and administrative personnel concerned with education were used for the distribution of limited free supplies of publications, informational material such as news releases, and periodicals. These lists were also made available to other Government agencies for the distribution of material relating to education and the prosecution of the war effort.

Newspaper and magazine writers were furnished information on educational activities by the Information Service, which, as in 1944, cooperated with the Children's Bureau in a Back-to-School Drive to encourage high school youth employed in war industries to return to school.

The Graphics Unit designed publications, prepared displays and exhibits for conferences, and continued its service of supplying photographs from its files to educational periodicals and others.

Publications of the Office have grown from a single document—the Commissioner's *Annual Report* for 1867-68—for the first year, to numerous bulletins now issued each year, in many fields of educational endeavor. *The Biennial Survey*, published in textual and statistical volumes, has become a time-honored institution to students of education throughout the United States and in numerous other countries. Publication of *School Life*, the Office's official monthly periodical since World War I, was resumed with the October, 1945, issue. (During World War II a biweekly newspaper, *Education For Victory* had taken its place temporarily.) Since January, 1945, another periodical, *Higher Education*, has been issued twice a month especially for colleges and universities. An-

nually the Office publishes an *Educational Directory*. This is issued in four parts—I. Federal, State and County Education Officers; II. City School Officers; III. Colleges and Universities; IV. Educational Associations. The Annual Report of the U.S. Office of Education is also published after the close of each fiscal year.

Printed documents issued by the U. S. Office of Education are available from the Office as long as the limited free supply lasts. They are available by purchase at nominal cost from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Research and Statistical Service. The chief functions of the Service are to prepare basic statistical reports and to supplement the staff of the various divisions with technical assistance in special problems of research. The Service completed basic statistical chapters for the *Biennial Survey of Education* for 1941-42 and progressed with the compilation of reports for 1943-44. It began a re-study of the schedule of statistical reports. As one step in this direction the Commissioner called together a group of educators to meet with staff members of the Office in defining the statistical reporting and research functioning of the Office. In addition to special consultative assistance to school officials and representatives of various agencies, the service: prepared several articles and circulars reporting results of special statistical studies; studied problems of statistical reporting in connection with the Surplus Property Utilization program; and designed special studies for obtaining information on changes in educational activities of schools and colleges since termination of hostilities.

Engineering, Science, and Management War Training. This program of short intensive college-level courses, designed in close collaboration with the industries, served to train men and women for specific technical and supervisory positions in war industries. It was terminated in June. The program was originally approved by Congress on Oct. 9, 1940 for the training of engineers, and later expanded to cover the training of chemists, physicists, and non-engineering production supervisors.

During its five years of operation, a total of 227 colleges and universities gave training to 1,795,716 persons, of whom 1,337,225 were trained in Engineering, 38,838 in Chemistry, 32,415 in Physics, and 387,238 in the non-engineering aspects of Production Supervision. Women constituted 16 percent of the total trainees.

Participating institutions were reimbursed for actual expenses incurred in conducting courses, the total amount thus expended being approximately \$58,000,000.

JOHN W. STUDEBAKER.

EGYPT. A kingdom in the northeastern part of Africa. The ruler in 1945 was Farouk I, who succeeded to the throne on Apr. 28, 1936. The total area of the country is approximately 386,198 square miles. Most of this, however, consists of desert, the habitable area in the Nile Valley and nearby oases comprising only some 13,600 square miles.

Government. The monarchy is hereditary in the male line. The present constitution, originally promulgated in 1923, was reintroduced in December 1935 after having been abrogated in October 1930. The Parliament consists of a Senate and a Chamber of Deputies. Two-fifths of the members in the former are appointed by the King, the rest being elected for ten-year terms. The 264 deputies are elective. Universal male suffrage prevails. The

Council of Ministers is appointed by the King but is responsible to Parliament—a somewhat anomalous constitutional situation that has given rise to complications.

Egypt proper is divided into five governorships and fourteen provinces. In addition, there are the extensive outlying desert areas, inhabited largely by nomads. Certain matters involving personal status are still subject to the jurisdiction of religious courts. Other cases involving Egyptians are decided before the national courts. By the Convention of Montreux of Oct. 15, 1937, the system of Mixed Courts was scheduled to disappear in October 1949. After that date foreigners in Egypt will be subject to the same judicial treatment as Egyptians.

During recent years the budget figures have been greatly influenced by abnormal wartime conditions. However, the Egyptian Government has usually managed to balance its budget over a period of time. The total amount of government debt as of May 1, 1942, was £92,706,520, on which the annual charges were £E4,101,903.

The defense of the country is nominally the responsibility of the Egyptian army and navy. During the last six years, however, the British and Allied forces have in effect defended Egyptian independence. Under Article 8 of the Anglo-Egyptian Treaty of Alliance of 1936 the British are authorized to station forces in the vicinity of the Suez Canal to insure its defense. Britain also has rights to use certain aerial and naval facilities.

Egypt is one of the two states exercising sovereignty over the Anglo-Egyptian Sudan, the Governor-General of which is nominally an appointee of the Egyptian Government (see ANGLO-EGYPTIAN SUDAN).

Cairo is the capital, except during the summer months, when the court and the cabinet move to Alexandria.

Events, 1945. The year opened in the midst of an electoral campaign preparatory to the general elections of Jan. 8. On that day the polling was heavy and in many constituencies close, but without the disorders that have marked previous elections. In sixty-one constituencies new votes had to be taken a week later because no candidate in them received a clear majority. The final results showed the following line-up: Saadists (the Government party) 124, Liberals 74, Makramists 30, Independents 29, Nationalists 7. The Cabinet was revised to include two additional portfolios.

The trial of the two Jewish terrorists accused of assassinating Lord Moyne on November 1944 began on Jan. 10 before the Supreme Military Court in Cairo. The two accused admitted having committed the crime with premeditation and declared they had come to Cairo under orders from a secret society. The prosecution asked for the death penalty, which was imposed on Jan. 22. The terrorists were hanged in Cairo on March 22.

At Yalta the Big Three had indicated that neutral countries which wished to participate in the San Francisco Conference must gain admission by declaring war against the Axis. Presumably to carry out this suggestion, Prime Minister Ahmed Maher Pasha on Feb. 24 read in the Chamber of Deputies a decree of King Farouk declaring war on Germany and Japan. As he was leaving the Chamber a few minutes later several shots were fired at him, and he died shortly afterwards. The assassin was a young lawyer who admitted having committed the crime and who was known to have had pro-Axis sentiments for which indeed he had spent some time in a concentration camp. The moderate policy of Dr. Maher was regarded with

great distaste by many nationalist Egyptians, though the Nationalist Party naturally dissociated itself from this act of violence. To replace Dr. Maher the King appointed Fahmy Nokrashy Pasha, Vice President of the Saadist Party, to serve as Prime Minister. Nokrashy's place as Foreign Minister was taken by Abdul Hamid Badawi Pasha, who was soon to leave for San Francisco as head of the Egyptian delegation to the UNO Conference.

Early in September it was announced that the Council of Ministers had approved a five-year plan involving the expenditure of £E25,000,000, ostensibly to relieve unemployment. This large sum was to go for the construction of schools and hospitals, the installation of irrigation and drainage projects, the purchase of rolling stock for the railways and the acquisition of American and British workshops set up in Egypt during the war. In general the Government showed signs of pursuing an enlightened policy in regard to the problem of raising the standard of living of the Egyptian masses.

Foreign Relations. Early in January the American mission in the Middle East under James M. Landis completed its work and disbanded. Simultaneously Egypt and Britain entered into a preliminary financial agreement according to which the British Government made available some \$40,000,000 for the purchase of American, Swiss and Swedish goods by Egypt. British traders in Egypt complained that this agreement put them at a disadvantage, while Egyptians complained that the sum involved represented only a small part of the vast sum of blocked funds held for their account in London—a sum said to be over £400,000,000. Henceforth the control exercised by the Middle East Supply Centre was to be limited to those commodities which would make heavy demands on shipping.

In the middle of February, en route from Yalta back to the United States, President Roosevelt paid a brief visit to Egypt. While there he received on board an American cruiser in the Great Bitter Lake of the Suez Canal three Middle Eastern monarchs, of whom the first was King Farouk. According to the official announcement made from the White House on February 20, their conversation dealt with the importance of reviving trade between the two countries and the expansion of American tourist travel in Egypt. Mr. Churchill also had a talk with the King on Feb. 17, but on what subjects was not revealed. On Feb. 28 Egypt became officially a member of the United Nations when its Minister in Washington signed the UNO Declaration at the State Department.

The Anglo-Egyptian Treaty of 1936 was due to expire in 1946. In anticipation of this event Egyptian public opinion became thoroughly exercised over such issues as the evacuation of British troops from the country, the revision of the status of Britain within the Suez Canal Zone and the continuation of the condominium in the Sudan. On Aug. 6 the Egyptian Prime Minister made a moderate speech on the subject in the Egyptian Senate, which was far from pleasing to the ultra-nationalist group. On Sept. 23 the Egyptian Cabinet issued a communiqué asking for the withdrawal of British troops and the incorporation of the Anglo-Egyptian Sudan into Egypt. These demands were made after careful consultation with a committee of Egypt's elder statesmen and was doubtless motivated by the fact that for two months England had failed to answer Egypt's written demands looking in this direction. The King, in opening Parliament on Nov. 12, declared: "Egypt is more resolved and

united than ever to bring about the disappearance of every restriction on her independence by the withdrawal of foreign forces and by the affirmation of unity in the Nile Valley." A formal request for revision of the treaty was presented at the British Foreign Office by the Egyptian Ambassador in December.

At the time of the London Conference of Foreign Ministers in September the Egyptian Government put forward claims for the annexation of Eritrea and for a trusteeship over Libya in case the latter colony were not given its complete independence. In October there were anti-British demonstrations in Cairo, which clamored not only for the preservation of Arab rights in Palestine but for immediate British withdrawal from Egypt. On the 15th students of the famous El Azhar University adopted resolutions underlining these demands. As the year wore on it became obvious that the nationalist forces in Egypt were gathering strength and that the British would find it increasingly difficult to justify their maintaining a strong military foothold in the country now that the war had ended in the Pacific.

Pan Arab Affairs. The traditional jealousy between the two reigning houses of Egypt and Saudi Arabia was believed to have been attenuated by a visit which King Farouk made to Ibn Saud in the Hejaz during the last week of January. Pan Arab leaders hailed this rapprochement with delight, and it undoubtedly paved the way for the creation of the Arab League by the Conference which assembled in Cairo on Feb. 14 (see PAN ARAB AFFAIRS). As a result of these conversations the Arab League actually came into being, with Cairo as its headquarters and with Farouk's Minister of Arab Affairs, Abdul Rahman Azzam Bey as its Secretary-General.

On Nov. 1 mobs in Cairo and Alexandria rioted against Jews and their property. Several were killed and much property was destroyed. Further disturbances took place on the next day, with hundreds of rioters being arrested. Order was finally restored, but not before a great deal of damage had been done and many stores looted, some of them belonging to foreigners and even to Egyptians.

Characteristics of the People. The estimated population in 1942 was 17,287,000—and is growing rapidly. The population of the three largest cities was: Cairo, 1,312,096; Alexandria, 685,736; Port Said, 124,749. The great mass of the population professes Islam. There are, however, approximately one million Copts and Greek Orthodox, in addition to some 80,000 Protestants, 130,000 Latins and Uniates, and 65,000 Jews. Egypt is the seat of the Coptic Church, to which the Christian population of Ethiopia also adheres (see ETHIOPIA). The great center of Moslem learning is the University of El Azhar in Cairo, to which students come from all over the Islamic world. According to law, education is compulsory for all children from seven to twelve years of age, though this rule is not rigidly enforced. The Government provides more educational opportunities for girls than do many other Moslem countries. There are fifty secondary schools supported by the Government, as well as eighty-one private institutions. Technical education is furnished in over fifty schools. There are also two state universities: the University of Fuad I in Cairo and the University of Farouk I in Alexandria. Arabic is the official language, and is spoken by most Egyptians. French and English are widely understood among the educated classes.

Social and health conditions leave much to be

desired, and one of the great problems of contemporary Egypt is to raise the standard of living and sanitary conditions among the masses, both rural and urban.

The Country and Its Economy. The only part of the extensive area of Egypt that has any real economic value is the Nile Valley. Above Cairo this is quite narrow, but in Lower Egypt it widens out into the fertile Delta. Thanks to the water and the fertilizing qualities of the Nile River this relatively small area has been able to support a dense population for several millenia. It is possible to raise two, or even three, crops a year. During the British occupation the economy of the country was directed into the production of cash crops, such as cotton, rather than foodstuffs. In Egypt the unit of area is the *feddân*, which equals 1.038 acres. In 1940 1,684,869 feddâns produced 9,189,634 qantârs of cotton (a *qantâr* is the equivalent of a hundred-weight). In 1940-41, 1,502,381 feddâns were put into wheat, 255,776 into barley, 368,870 into beans, and 32,538 into onions. In 1943 there were 1,950,957 feddâns of corn, 729,106 feddâns of millet, and 642,121 feddâns of rice. In 1943 the country possessed 30,896 horses, 826,796 donkeys, 1,202,284 cows, 1,100,124 buffaloes, 1,423,772 sheep, 759,794 goats and 174,054 camels. Egypt's oil production in 1941 was 1,220,557 tons, and in 1944 some 1,800,000 tons. Explorations have been going on in the hope of discovering larger fields, but thus far with little success.

In 1938, the last prewar year, Egypt's imports were valued at £E36,954,373 and her exports at £E29,342,485. Her trade with Great Britain, as regards both exports and imports, was greater than that with any other country. The United States came second as to imports, and France second as to exports.

The Egyptian railway system comprises some 2,750 miles of main line in addition to nearly 1,000 miles of light railways. Egypt has been united by direct rail communications with Syria and Turkey since the British Army completed building the 175-mile line between Tripoli (Lebanon) and Haifa during the war. The rivers and canals of Egypt are extensively used for transport.

The country enjoys a strategic location along some of the world's principal air routes, which connect the three continents of the Eastern Hemisphere. The Suez Canal passes through Egyptian territory but is subject to a special regime (see SUEZ CANAL) and is owned by a French corporation. According to the terms of the concession under which the Canal was constructed, it is to revert to the Egyptian Government in 1968.

ROBERT GALE WOOLBERT.

EIRE (IRELAND). A sovereign, independent state, affiliated for certain purposes with the British Commonwealth of Nations; comprising the 26 counties of Southern Ireland formerly designated the Irish Free State. The name was officially changed to "Ireland" in English and to "Éire" in Gaelic by the Constitution effective Dec. 29, 1937. The area of Éire is 26,601 square miles.

Government. Under the Constitution proclaimed Dec. 29, 1937, there is a President elected by popular vote for 7 years. The Oireachtas (Parliament) includes two houses: the Dail Éireann or House of Representatives of 138 members elected by popular suffrage for five years, and the Seanad Éireann or Senate of 60 members (43 elected on a vocational basis, 6 elected directly to represent the two universities, and 11 nominated by the Prime Minister). Executive power is ex-

ercised by the Government, or Cabinet, which is responsible to the Dail. In the election of June 14, 1945, Sean T. O'Kelly was elected President, succeeding Dr. Douglas Hyde. Prime Minister Eamon de Valera, leader of the Fianna Fáil party, was elected by the Dail Éireann on June 30, 1938, and reelected June 9, 1944.

Events, 1945. The status of Éire in relation to the British Commonwealth was under discussion after July 11, when Prime Minister Eamon de Valera, replying to a question in the Dail Éireann, asserted that Éire was a republic. Again in the Dail on July 17 de Valera insisted that Éire was an independent republic "associated as a matter of our external policy with the states of the British Commonwealth." Pressed by Opposition leader James Dillon, an advocate of Éire within the Commonwealth, to say whether Éire was within the British Commonwealth, de Valera replied that the material necessary for a conclusive answer was not available.

The discussion caused speculation as to whether Éire was contemplating secession from the British Commonwealth, although there seemed to be little evidence of that intention. At the annual convention of de Valera's party, Fianna Fáil, in Dublin on Nov. 6 the Prime Minister made it clear that he had no intention of severing the links which kept Éire in association with the British Commonwealth. A motion to leave the Commonwealth was withdrawn after de Valera argued that although Éire was a sovereign independent republic there was nothing inconsistent in having the British King sign letters of credence of foreign diplomatic representatives coming to Éire and of representatives of Éire going abroad.

The surrender of Germany was followed by a revival of discussion about Éire's position of neutrality and by minor disturbances at home. On May 13 Éire's neutrality was sharply criticized by Prime Minister Winston Churchill in the British House of Commons. Immediately after the surrender localized rioting, centered in large part around Trinity College, resulted chiefly in broken windows. Apologies were made by the Minister of External Affairs to the American consulate and the British representative's office, where windows were broken, and by the Provost of Trinity College to Prime Minister de Valera. Replying on July 19 in the Dail Éireann to Deputy James Dillon's criticism of his call upon the German Minister to express his regret at the reported death of Adolf Hitler, de Valera declared that he had merely followed universally established practice and that no question of approval or disapproval was involved.

Domestic Problems. Early in July the crushing of a plot to overthrow the de Valera government was made public. On July 4 the Prime Minister, in a debate in the Dail, disclosed that he had found it necessary to re-intern Sean McAteer, former chief of staff of the Irish Republican Army. McAteer was imprisoned by the Government of Northern Ireland in 1944 (See YEAR BOOK for 1944, p. 305). Released with other internees after the European war ended, McAteer had been plotting against the Government, de Valera said, and had publicly recruited new members for his outlawed organization. Others who had been released were under suspicion of plotting against the Government, murdering police officers and holding illegal meetings, the Prime Minister said.

It was later disclosed that 40 members of the outlawed Irish Republican Army had recently been arrested. Police authorities said that the

would-be rebels were among some 400 I.R.A. members released from the Curragh internment camp. Sean MacCool, commander in chief of the outlawed army, was arrested as he was about to board a train for his home in Mayo. It was understood that the chief target for assassination was Police Superintendent John Gantley.

On Armistice Day units of Southern Irish branches of the British Legion went to the War Memorial Park by separate routes because their parade had been banned. They wore their medals under their overcoats and carried their flags furled. In a special service at St. Patrick's Cathedral, Canon E.W.F. Campbell gave the number of Irish volunteers as 160,000. Unemployment benefit for these volunteers was an unsettled question in Britain at this time. In a memorial presented to Prime Minister Attlee by General Sir Hubert Gough, president of the Commonwealth Irish Association, and a number of other signatories in late November, it was pointed out that all these volunteers, whether servicemen or civilian war workers, were entitled on demobilization to full benefit under the United Kingdom unemployment insurance code. Return to Eire meant, however, forfeiting their unemployment rights, so that repatriation deprived them of a valuable protection against unemployment to which they had contributed.

Foreign Trade. Eire's postwar plans laid heavy emphasis upon the expansion of the country's foreign trade. Prime Minister de Valera summoned his foreign diplomatic representatives to a special conference in Dublin on Sept. 11 to hear a review of Eire's foreign trade plans, which were understood to provide for agreements with the United States, Canada and Great Britain. The possibilities of increased trade with the United States were described on Oct. 11 at the Publicity Club in Dublin by American Consul General Thomas McEnelly. Although McEnelly said frankly that such agricultural products as livestock and butter could not find a market in the United States, there was an increasing demand for whisky, wool, rabbit skins and a number of other products as well as for such Irish specialties as lace, gloves and pottery.

Eire's export position with respect to Britain was complicated by the fact that Britain, normally the market for 90 per cent of Irish exports, had not been able to sell the equivalent to Eire during the war, and that as a result Irish sterling balances accumulated in England amounted to approximately £230,000,000 in 1945. Until Britain could settle this obligation the trade future remained obscure. De Valera gave intimations in the Dail in July that a working arrangement could be reached if Britain would end the partition of Northern Ireland from Eire, but the events of the war appeared to have made that solution increasingly remote. Sean Lemass, Irish Minister for Industry and Commerce, visited London in early October, but de Valera, asked to comment, said in the Dail on Oct. 10 that the time for full-scale trade discussions had not yet come. Officials of the Ministry of Industry and Commerce intimated that Eire's strict limitation and control of exports would be maintained for a considerable time.

In the meantime Lemass was prodding domestic industry to improve its efficiency and the Federation of Irish Manufacturers, Ltd. was seconding his efforts. On the negative side, companies that lagged in either production or management were under the threat of being scrapped. On the positive side, the Ministry of Industry and Commerce

was granting, in the latter part of 1945, high priority ratings for import licenses and dollar exchange for the purchase of such supplies as textile machinery, modern distilling equipment, machine tools, and shoe manufacturing machinery. Eire was a member of the sterling area and the dollar pool, and Britain, the manager of the pool, was granting promptly requests for the purchase of machinery and other essentials from the United States. Eire retained a slightly favorable balance of trade when invisible items were taken into consideration and had no external debt to service.

The internal financial position showed the effects of subsidies for food and fuel, children's allowances, an additional bonus to public servants and the mounting costs of the civil service, and a small budget deficit was anticipated for 1945-1946. At the same time Eire was carrying through a program for Irish Aid to Europe developed earlier in the year. In October a shipment of draught animals, meat cattle and other supplies reached Rotterdam, and the Netherlands was arranging to buy in Eire some 6,000 head of cattle and 700 horses.

Air services from Eire developed rapidly in the latter part of the year. Early in November the Eire company, Irish Airways, resumed its Dublin-London service, suspended in 1939. By the first week in December two commercial services were operating between Dublin and Liverpool. American airplanes utilized airports in Eire in the course of American-British discussions on passenger rates. Eire's geographical position was the basis for optimistic predictions for the future of her airports, and it was assumed that Commerce Minister Lemass' October visit to London, where he held conferences with Lord Winster, British Minister of Civil Aviation, broke the ground for an improved position for Eire in transatlantic services.

The People. In the census of 1941 the population stood at 2,989,700. Primary education in the country is directed by the State, and there is almost no illiteracy. Almost all (94 per cent) of the people belong to the Roman Catholic Church, with the remainder divided among Episcopal, Presbyterian, Methodist and other churches.

The Economy of the Country. Agriculture, stock raising, manufacturing and fishing are the chief occupations of the people of Eire. Flour, sugar, jams, tobacco products and alcoholic beverages rank high among the goods manufactured. Eire showed a favorable balance of trade in 1943, with imports at £26,082,107 and exports at £27,479,776.

ALZADA COMSTOCK.

ELECTIONS, U. S. Interest in elections in 1945 with few exceptions was centered on municipal contests. Mayors were elected in many of our largest cities including Boston, Buffalo, Cleveland, Detroit, Los Angeles and New York and state-wide elections of general interest were held in Connecticut, Ohio, Pennsylvania, Massachusetts, New Jersey and New York.

The only state electing a Governor during the year was Virginia where Lieutenant Governor William M. Tuck succeeded Governor Colgate W. Darden, Jr. Also elected in Virginia were Lieutenant Governor, Attorney General, members of the House of Delegates, and certain local officials.

There were but two Congressional contests. In a special election in the 24th Congressional District in Illinois Mr. Roy Clippinger was elected and in the 4th Congressional District in New Jersey Mr. Frank A. Mathews, Jr., won. Both were Republicans.

Illinois also had a general election for certain

municipal officials in April and for county commissioners in June, while New Jersey elected county and municipal officials in November as well as members of the State Legislature. The Republicans won decisive majorities in both houses of the State Legislature. In Kentucky where the members of the State Legislature were also elected, the Democrats won control of the State Senate by a margin of 20 to 17 in one of the closest contests in history. The House of Representatives continued Democratic by a two-thirds majority. There were few judicial contests in 1945 with the election of two Superior Court Justices in Pennsylvania and Supreme Court Justices in Illinois, Michigan, Wisconsin and New York being of most importance.

Municipal, township and school elections on a state-wide basis were conducted in South Dakota in the spring and the State Superintendent of Schools and various judicial officials were chosen in Wisconsin on April 3.

Changes in State Constitutions. On Aug. 7, Georgia voters in a special election by a margin of three to one adopted a streamlined Constitution to replace the much-amended version of 1877. The new Constitution establishes county and municipal home rule; provides for additional school financing on a county-wide basis; establishes the merit system for state employees; eliminates any possibility of a poll tax being re-established; increases the salaries of the Governor, Judges and Legislators, and modernizes the State's penal system.

Five of the six amendments proposed to the New York Constitution carried, and in addition a proposition was approved calling for an increase of from \$5,000,000 to \$6,250,000 in the permissible state subsidy for low-rent housing. The Constitutional Amendments which were approved by New York voters would: 1) eliminate special elections for Lieutenant Governor unless a Governor was also to be elected; 2) permit voters who move from a non-personal registration district 30 days before an election to vote; 3) authorize the division of large towns in establishing assembly districts; 4) permit county supervisors to override decisions of county executives on local legislation; 5) extend existing Civil Service preferences to veterans.

A proposed amendment to elect the Governor and Lieutenant Governor on a joint ballot lost. All of the other amendments were adopted by substantial margins with the exception of the veterans' preference proposal which was approved by a small majority.

During the year eight cities adopted, by referendum, the council-manager form of government. There are now approximately 358 cities, having a population of 5,000 or over, operating under the council-manager plan.

Mayoralty Elections. The most important elections of 1945 were the mayoralty contests which were held in approximately 450 cities with a population exceeding 10,000. Many of these local elections were held in April or May; a few were scheduled for the summer, and the balance for November. Mayoralty elections were conducted in all but three of the States during 1945.

A summary of the outcome of the more important mayoralty contests follows:

Albany, N.Y.—Despite a grand jury investigation and a spirited campaign, the Democratic administration was returned to office and Erastus Corning was re-elected Mayor.
Akron, Ohio—Charles E. Slusser (R) was re-elected after a close race.
Atlanta, Ga.—William B. Hartsfield (D).
Birmingham, Ala.—W. Cooper Green (Non-Partisan).
Boston, Mass.—Congressman James M. Curley (D) won over five opponents, polling nearly as many votes as

all five combined. A former Governor of the State, this will be Mayor Curley's fourth term as Mayor.

Bridgeport, Conn.—Jasper McLevy (Socialist) re-elected for the seventh consecutive two-year term.

Buffalo, N.Y.—Bernard J. Dowd (R) won a surprise victory by some 20,000 votes.

Cleveland, Ohio—Thomas L. Burke (D) won 68 per cent of the votes and became the first Mayor to succeed himself in 25 years.

Detroit, Mich.—Mayor E. J. Jefferies (Non-Partisan) re-elected for a fourth term by 57,518 votes over Richard T. Frankenstein, OIO and Political Action Committee candidate in a heated campaign involving indirectly racial and religious issues.

Hartford, Conn.—Cornelius A. Moylan (R).

Louisville, Ky.—E. Leland Taylor (D) won by 205 votes with approximately 100,000 votes cast. A contest will probably be filed. All of the Aldermen are Republicans.

Los Angeles, Calif.—Fletcher Bowron (Non-Partisan).

Minneapolis, Minn.—Hubert H. Humphrey (Non-Partisan).

New York City—William O'Dwyer (D), Tammany Hall candidate was elected by a plurality of 685,175, one of the largest in the City's history. In addition to Democratic support, Mayor O'Dwyer was backed by the American Labor Party while Judge Jonah J. Goldstein, former Democrat who ran as the Republican candidate, was endorsed by the Fusion and Liberal Parties. Mr. Newbold Morris ran on a "No Deal" ticket and had the support of retiring Mayor La Guardia. Mayor O'Dwyer is the first Democrat to hold the office in twelve years.

Omaha, Neb.—Charles W. Leeman (D).

Pittsburgh, Pa.—David L. Lawrence (D).

Portsmouth, N.H.—Mrs. Mary C. Dondero (D) 'was re-elected

St. Louis, Mo.—A. P. Kaufmann (R).

Syracuse, N.Y.—Frank J. Costello (R).

Wilmington, Del.—Thomas Herlihy, Jr. (R).

Servicemen's Voting. Voting by servicemen in a number of instances continued to affect the outcome of close election contests. As in the 1944 elections, the Democratic candidates continued to receive approximately 10 percent more of the servicemen's vote than the Republicans. With the prospect that for some years large numbers of Americans will continue to serve in the Armed Forces both here and abroad, efforts were continued to extend and liberalize State and federal election laws so as to make even more effective existing opportunities for servicemen to vote. The report of the War Ballot Commission (Senate Document 6, 79th Congress, 1st Session) indicating that only 108,692 Federal War ballots (the short form ballot) were cast out of a total of 2,700,000 servicemen's votes led to a drive by a number of Congressmen and the National Association of Secretaries of State to amend the Soldier-Voting Law by repealing Title III providing for a Federal War ballot. The fact that the Secretary of War in concluding a report to Congress on the subject raised questions concerning the utility of the Federal War ballot gave additional impetus to the drive to eliminate such a voting procedure. Action by Congress to revise war voting legislation is expected early in 1946.

Presidential Succession. Another subject being considered by Congress during 1945 and of general interest had to do with presidential succession legislation providing for the naming of a President in case anything happened to President Truman. The House of Representatives during the summer passed a bill placing the Speaker of the House next in line of succession, which was in accord with President Truman's recommendations. The Senate has taken no action on the House bill seeming to prefer the present succession statute enacted in 1886 which provides that the Secretary of State, in the absence of a Vice President, shall succeed to office in the case of the death of the President. The fact that the present Secretary of State is a former Senator may explain the present legislative impasse. Failure to act on the legislation left unsettled such questions as: Would a special election

be necessary to elect a President under the present law or would the Secretary of State serve out the unexpired term of the President? Could Congress call a special election and if it did, could the Acting President question the constitutionality of such an election? Would he serve out the term of his predecessor or only as temporary President until a special election could be held? These were some of the questions that the Senate Privileges and Elections Committee had before it when President Truman's dangerous flight to his Missouri home on Christmas Day dramatically emphasized the necessity for completing action on the President's recommendations for re-writing the succession law of 1886.

On Jan. 1, 1946, the Democrats held 242 seats in the House of Representatives; the Republicans 191; the American Labor Party and Progressive Party one each. In the Senate the Democrats have 56 Senators, the Republicans 39 and the Progressives one (LaFollette of Wisconsin).

There are today 25 Democratic Governors and 23 Republican Governors. Preceding the presidential election of 1944 there were 26 Republican Governors and 22 Democratic Governors.

Trends. Although political prognosticators issued their usual partisan interpretations concerning the outcome of the November election there were no unusual upsets. The Democratic-American Labor Party landslide in New York City was offset by Republican gains in formerly Democratic controlled up-state cities such as Buffalo. The large cities throughout the country continued to elect Democratic Mayors while numerous county, town and rural elections went Republican.

HUBERT R. GALLAGHER.

ELECTRICAL INDUSTRIES. The year ended with a strong and continuing downward trend in production of electrical machinery, reflecting the termination of government war contracts. Similarly, Department of Commerce indexes for shipments, new orders, and inventories, were at the lowest yet reached. The production index for electrical refrigeration equipment and also for electrical appliances, was rising steadily, and is expected to continue to rise in 1946, perhaps reaching 1940 and 1941 levels. The trend for industrial apparatus and miscellaneous electrical material also was strongly downward, the high points having been reached in 1943 and 1944, the peak war production years. The electrical manufacturing industry's general production-index, therefore, was declining sharply at the year-end. Similar trend was reflected in corresponding movement of the Federal Reserve Board index of general industrial production. Outstanding contrast was presented by the index representing the generation and sale of electric power, which was holding.

Considering 1940 production figures as an index of 100, production of electrical appliances was at 40 compared with 11 for 1944; electrical refrigerators at 13, compared with 3; electrical material at 244, compared with 337; industrial electrical apparatus at 285, as compared with 356; electric power transmission and distribution equipment at 114, compared with 100; insulated wire and cable at 126, compared with 144.

Considering further figures for 1940 as an index of 100, the electrical manufacturing industry over-all production-index for 1945 stood at 283, as compared with a Federal Reserve Board general industry figure of 168, and a population index figure of 106. In other words, electrical manufacturing industry production, although receding

from its wartime peak was still 68 percent above the general manufacturing index for 1945.

According to year-end reports issued by the Electrical Manufacturers Association, 1944 was the industry's peak production year, during which some 9 billion dollars worth of electrical apparatus equipment and supplies were produced. The 1945 level amounted to approximately 7 billion dollars, and the expectation for 1946 is from 4 to 4.5 billion dollars, about the same as for the last normal peacetime year of 1940. It should be remembered that while certain elements of the electrical manufacturing industry continued to produce peacetime electrical goods during the war years, large portions of the industry normally producing refrigerators, appliances, and other materials not essential to wartime requirements were completely converted to the manufacture of machine guns and such wartime items. These substantial elements of the industry were faced with the necessity for complete reconversion and retooling, to enable resumption of production of normal peacetime electrical goods.

Typical of wartime electrical developments and applications was the all-electric torpedo developed for the Navy. An electrically driven torpedo leaves no tell-tale wake in the water to reveal its presence as did its predecessor, the air-driven torpedo. 10,000 electric torpedoes were made in a plant normally devoted to the manufacture of electric power transformers. The torpedoes are driven by a new type of motor designed especially for the purpose and developing the greatest horsepower for its weight of any motor ever built. A "proximity fuze" developed and used during the latter part of the war included a tiny special radio broadcasting and receiving set which determined the proximity of shells, rockets, and bombs to their targets, and exploded them when they came within the predetermined distance of 75 feet. This was one of the most significant and effective developments of the war. In the advance models of the proximity fuze, a wind-driven generator, so tiny that it could be held in the palm of one's hand, furnished the power for the radio beams. This generator operated at the fantastic speed of 40,000 rpm. The invention and improvement of radar equipment were outstanding prewar and wartime electronic developments. (See COMMUNICATIONS; ELECTRONICS; SHIPPING.)

The year marked the 100th anniversary of the birth of Roentgen, and the 50th anniversary of his discovery of x-rays. Industrial x-ray equipment development took a seven league step during the year, with the announcement of a 100-million-volt x-ray machine officially known as an induction electron accelerator, or "Betatron." The new Betatron produces x-rays far more powerful than any previously attained, capable of penetrating a thickness of metal considerably greater than the 12 inches or so reported last year for the then record 2-million-volt x-ray machine. The Betatron also is the source of radiations other than x-rays, which are expected to be of significant value in research in the new field of atomic, or nuclear, energy. Creation of matter from energy, reverse of the process in the atomic bomb, can be accomplished with radiation from the new device. For example, an ordinary half-dollar coin can be made to give off rays like those of radium by a few minutes' exposure to the intense radiation stream from the Betatron, the action resulting from the transmutation of silver to cadmium and to palladium, and the accompanying transmutation of the copper of the coin's alloy to nickel. These laboratory transmutations, al-

though sub-microscopic in magnitude, are actual and indicate the possibilities of a startling new era.

Relinquishment of wartime security controls revealed that a 20,000,000-volt Betatron has been in service at a government arsenal since late in 1943, where it was used to take x-ray photographs through ordnance steel up to 15 inches or more in thickness, to reveal any internal flaws.

High-voltage electric power cable insulated with butyl compound went into service during 1945, and established excellent performance records. Poly-ethylene insulation, used extensively during the war for high-frequency coaxial insulation, was shown to have dielectric and physical properties desirable in such items as control cable, power cables, communication, and television cables. "Operation PLUTO" (Pipe Line Under The Ocean), one of the most effective secret weapons in the Allied invasion of continental Europe, and the means of getting a million gallons of gasoline per day from England to France without the use of highly vulnerable tank ships, can be credited in substantial measure to American manufacturers of electric-power cable. The project comprised a group of 20 three-inch oil pipelines laid on the bed of the English Channel. One type of the pipe was essentially a submarine electric power cable minus power conductors and core.

Welding, in the early 1900's, was just a handy process for repairing broken metal parts. By the 1920's it was being used extensively in the manufacture of pipelines and pressure vessels. In the 1930's, the Germans made the first welded battleship, saving much weight for extra guns and fooling the world as to the strength of apparently small vessels. In 1937, was built the first U.S. ocean-going all-welded tanker. By 1945, at the end of World War II, welding had become a giant in industrial fabrication processes. It was the primary process used in assembling 3,500 U.S. wartime cargo ships, and it played an essential part in the production of many billions of dollars worth of ordnance and other wartime equipment. This huge evolution was contributed to by an enormous research program. In the period 1942-45 inclusive, the Office of Scientific Research and Development made huge outlays for welding research. This was augmented by private-industry research programs such as the quarter-million dollars provided for welding studies in 1945 by the Welding Research Foundation—jointly sponsored by the American Welding Society and the American Institute of Electrical Engineers. Significant developments included low-alloy electrodes (welding rods) with which a novice as well as an expert could weld armor plate up to more than 4 inches of thickness; automatic welding machines; power-operated work-holding machines of heavy tonnage capacity, that move heavy work readily into positions for most rapid and efficient welding; "stored-energy" spot-welding equipment for aluminum and other light metals, which enabled the large metal surfaces of airplanes for example, to be "sewn up" almost like, and as rapidly as, a huge sewing machine could sew up fabric.

Electric blankets, with accurate and sensitive electric or electronic controls to maintain even temperature for the sleeper regardless of variable room temperatures, were appearing on the retail market by the close of 1945, reflecting the industry's extensive and successful experience with electrically heated aviation clothing for the crews of high-flying military aircraft. Work was reported to be underway on the first all-electric

railroad dining car. Patterned upon the electric galley developed for naval submarine installation, the kitchen is to be equipped with heavy-duty electric ranges, automatic broilers and deep-fry kettles, bake ovens, grills, griddles, coffee makers, dish washing and refrigerator equipment. Dining space in the car will have the newest lighting and air-conditioning equipment. The car will be completely self-contained, with electric power furnished by two Diesel-engine-driven electric generators.

Probably the world's largest electric refrigerator was a 15-acre storage cave operated in Kansas by the War Food Administration for the summer storage of perishable foods. Capable of handling from 30,000 to 50,000 tons of food, the refrigeration capacity was 250 tons every 24 hours. Air-conditioning is beginning to appear on trolley cars and motor buses, for operation in the southern States.

G. ROSS HENNINGER.

ELECTRIC LIGHT AND POWER. American industry with its mass-production methods furnished the bulk of the material which turned the tide of World War II and brought it to Allied victory. The American electric light and power industry furnished the energy which turned the wheels of industry and gave to each industrial worker greater production capacity than any other worker in the world.

Power Production. Receding by 3.6 percent from the all-time high record established in 1944 by the demands of war, the electric power output in the United States for 1945 totalled about 222.4 billion kw-hr. This was the first time since 1938 that there was any recession in the steadily increasing annual output of electric power. Even so, 1945 power output exceeded 1939 power output by 71.5 percent. Fuel-burning electric generating plants produced about 63.8 percent of the total for 1945, as compared with 68 percent for 1944, and 66.7 percent for 1943. Hydroelectric generating plants produced 36.2 percent of the 1945 total, the largest proportion in several years.

Of continuing significance is the steady growth in the proportion of the total electric power generation coming from government-owned projects. Federal government power plants in 1945 turned out more than twice as great a share of the nation's total electric power as in 1940. Selected electric-power production statistics are given in Table 1. The relatively sharp drop in the "use and losses" figures in this tabulation between 1944 and 1945, reflect the release of some inefficient plants and equipment from service following the termination of hostilities.

TABLE 1—ELECTRIC POWER PRODUCTION IN U. S.
(Billions of kilowatt-hours)

Year	From Fuel	From Hydro	From Canada	Gross Total	Uses and Available Losses	for Sale
1945*...	142.2	80.1	1.8	224.1	30.2	193.9
1944*...	156.6	74.0	1.6	232.2	34.1	198.1
1943 ...	147.3	73.9	1.5	222.7	31.2	186.9
1942...	125.0	64.2	1.4	190.6	29.0	159.4
1941....	116.9	51.3	0.9	169.1	27.3	140.1
1939....	49.1	33.3	0.4	82.8	19.1	63.7
1938....	67.2	33.2	1.0	96.9	21.6	76.3

* Preliminary figures. † Revised figures.

Finances. Although the estimated total of 193.9 billion kw-hr of electric energy sold during 1945 represents approximately a 2.5 percent decrease from the 1944 all-time peak, the total revenue from the sale of electric energy increased by about 2 percent. This seeming disparity resulted from the relinquishment of wartime restrictions on the utiliza-

tion of power, which stepped up the proportion of power sales in the higher-price smaller-quantity brackets as compared with the wartime concentration in the low-price large-quantity industrial bracket. In the class of large light-and-power customers, revenue dropped about 3 percent, amounting to about \$29,000,000; in the municipal and miscellaneous class, revenue dropped about 9 percent, amounting to \$8,500,000. Revenue from all other classes of electric light and power customers increased, reflecting increased power availability to and utilization by those classes. Greatest increases were noted in the rural and the residential classes, where the increases were approximately 9 percent and 7 percent respectively, representing in money about \$7,000,000 and \$70,000,000.

Estimated total gross revenue from all electric power sales amounted to about 3.33 billion dollars, as compared with revised figures of 3.28 billion for 1944, and 3.08 billion for 1943. As the result of an increase in the total number of small light-and-power customers, the total revenue from this class was up about 2 percent. Continuing a trend of many years standing, the consumption of electric energy by the average American household again increased and the cost decreased. Average residential use of electric power was estimated at 1,225 kw-hr, for which the average bill was \$41.90, reflecting an average rate of 3.42 cents per kw-hr, a new low point. Comparable figures for 1944 were 1,151 kw-hr at 3.51 cents; for 1940, 952 kw-hr at 3.84 cents; for 1935, 672 kw-hr at 4.99 cents; for 1930, 543 kw-hr at 6 cents; for 1926, 428 kw-hr at 6.98 cents. The average annual bill per rural customer increased from less than \$71 in 1944 to nearly \$74 in 1945, reflecting an average rate of 2.47 cents per kw-hr for both years.

A statistical summary of data reflecting electric power sales and related revenue is in Table 2.

TABLE 2—ELECTRIC POWER SALES AND REVENUE

	Total Number of Customers	Energy Sales in Millions of Kilowatt- Hours	Revenue in Thousands of Dollars
Urban Residential			
1945*	28,000,000	34,100	1,167,000
1944*	27,371,260	31,266	1,097,726
Change	+628,740	+2,834	+69,274
Rural			
1945*	1,220,000	3,650	90,000
1944*	1,144,241	3,373	82,842
Change	+75,759	+277	+7,158
Commercial and Industrial			
1945*	4,562,000	156,250	2,077,000
1944*	4,532,891	159,522	2,096,184
Change	+147,109	-3,272	-19,184
Totals			
1945*	33,682,000	194,000	3,334,000
1944*	33,048,392	193,161	3,276,752
Change	+633,608	+839	+57,248

* Preliminary figures. * Revised figures.

Electric utility financing for 1945 amounted to an estimated total of \$1,322,253,000, exceeding the previous top-record year of 1936. The published record shows only four other times that the utility financing program went up into the billion-dollar bracket—in 1931, 1935, 1936, and 1944. Reason for the record refunding is revealed in a comparison of the average rates of yield of mortgage bonds and preferred stocks in 1945 and in recent past years. Bond yields decreased from 3.23 percent in 1943 to 2.92 percent in 1944 and to 2.77 percent in 1945. For preferred stocks, the yields were 4.44, 4.09, and 3.86 percent respectively. Investors were offered 70 electric utility issues as compared with 50 in 1944, including 47 issues of mortgage bonds, 12 issues of preferred stock, 8 issues of common stock, 2 issues of debentures, and

one series of notes. Utility financing also included new capital amounting to \$39,699,751, insignificant compared with the refunding figure, but twice as much as in 1944 and more than four times as much as in 1943. Institutional investors took about 9 percent of the utility bond issues as compared with 11 percent in 1944 and 41 percent in 1941.

For each dollar of gross revenue from the sale of electric energy, the electric utility industry reported the following disposition: For taxes, 22.8 cents; for gross dividends and surplus, 15.4 cents; for maintenance and miscellaneous operating expenses, 15 cents; for salaries and wages, 13.3 cents; for fuel, 13 cents; for depreciation, 10.8 cents; for fixed charges, 9.1 cents. During the past ten years, utility operating expenses have increased from 50.9 percent of total gross revenue from electric power sales to 64.2 percent in 1945, after taxes.

Operation. Fuel consumption for electric power generation for the 12-month period ending Oct. 31, 1945—including coal, oil, and gas—amounted to the calculated equivalent of 97 million tons of coal, as compared with the final figure of 103.92 million tons for 1944. Generating plant efficiency, expressed in the nation-wide average pounds of coal burned per kw-hr generated, remained at the 1944 figure of 1.33, reflecting the continued use of obsolescent plants and wartime fuels of uncertain quality. The actual fuel consumption in electric generating plants for the 12 months ending Oct. 31, 1945, as reported by the Federal Power Commission, was: coal, 77.03 million tons; oil, 19.42 million barrels; gas, 336.04 billion cu ft.; all for a coal equivalent of 97.2 million tons. Electric power generated from this fuel totalled 142,217,000,000 kw-hr from a total station capacity of 35,017,000 kw, representing an annual output of 4,023 kw-hr of energy per kw of installed capacity. Correspondingly, water power production was 80,150,000,000 kw-hr from an installed hydroelectric capacity of 14,884,000 kw, representing an average annual production of 5,437 kw-hr per kw of installed plant capacity.

Generating Capacity. Although the wartime priority and allocation controls exercised through the War Production Board were relinquished progressively, following the collapse of Germany in May, and essentially removed after the collapse of Japan in August, the effect of wartime conditions was definitely reflected in the fact that the net additional electric generating capacity completed during 1945 amounted only to some 712,000 kw, the smallest yearly increment since 1941. Nearly 90 percent of the increase was made in the Southern and Central regions, reflecting the expanding industrialization from wartime requirements. As of Jan. 1, 1945, additional generating plant capacity totalling 1,250,000 kw had been scheduled, but the unexpectedly rapid ending of the war cut that nearly in half.

As of the end of 1945, the total U.S. electric generating capacity was installed 70 percent in fuel-burning plants and 30 percent in hydroelectric plants. The corresponding electric power production was 63.8 percent and 36.2 percent. Of the 1945 total capacity, 80.5 percent represented privately owned utility properties and 19.5 percent local and Federal government bodies.

The 1946 budget for electric power developments in the United States was estimated at about \$900,000,000, within \$19,000,000 of the all-time high industry budget of 1930. To this estimate of the utility industry must be added approximately another \$100,000,000 for the 1946 expenditures on government-owned power facilities. Tentative di-

TABLE 3—ADDITIONS TO HYDROELECTRIC GENERATING SYSTEMS CAPACITY

Year	Fuel Plants or Systems			Total	Hydroelectric Plants or Systems			Grand Total of Fuel and Hydro
	Public	Private	No. Kilowatts		Public	Private	No. Kilowatts	
1945	6	100,500	21	521,100	27	621,800	31	887,400
1944	14	12,527	34	765,510	48	778,037	56	1,545,892
1943	7	144,700	42	1,090,480	49	1,835,100	49	2,924,080
1942	8	181,500	44	1,574,700	52	1,756,200	61	2,783,100
1941	22	188,000	63	2,104,100	85	2,292,100	102	3,078,300
1940	39	243,000	57	1,210,500	96	1,453,900	113	1,284,830
1934	..	..	..	..	..	..	..	94,700
1929	..	..	..	..	..	..	..	2,330,500

vision of this budget is: for fuel-burning power plants, 288 million; for hydroelectric power plants, 25 million; for electric power transmission facilities, 176 million; for substation facilities, 118 million; for power distribution facilities, 358 million; for miscellaneous plant improvements, 50 million. Corresponding capital expenditures for 1945, as tentatively reported at the close of the year, were: fuel stations, 106 million; hydroelectric stations, 13 million; power transmission facilities, 69 million; substation facilities, 47 million; power distribution facilities, 204 million; general plant improvements, 17 million; total, 456 million dollars. Additions to plant capacity in prospect for 1946 and later total 5.6 million kw-hr, of which 25 percent is to be in government plants.

Selected statistical data indicating the trend in additions to electric generating capacity are given in Table 3. Geographical distribution of the electric generating capacity of the U.S. after the close of 1945 is given in Table 4. The fact that the totals indicated in Table 4 for 1945 are slightly lower than the totals indicated in the corresponding YEAR BOOK for 1944 seems to indicate two things: First, a slight discrepancy in the figures reported by industry; second, the matter of obsolete power generating equipment that was put back into service to meet war needs.

TABLE 4—DISTRIBUTION OF ELECTRIC GENERATING CAPACITY REPORTED IN ELECTRIC UTILITY POWER PLANTS AT CLOSE OF 1945

Areas	Plants	Thousands of Kilowatts
6 New England states	313	3,197
3 Middle Atlantic states	372	10,432
5 East North-Central states	678	11,464
7 West North-Central states	893	3,485
8 South Atlantic states	392	6,502
4 East South-Central states	156	3,414
4 West South-Central states	406	2,669
8 Mountain states	419	2,634
3 Pacific states	294	6,105
Total United States	3,923	49,902

Rural Electrification. Reports of the Rural Electrification Administration indicate that the average REA customer used 1,525 kilowatt hours during the year, which he bought at an average rate of 3.45 cents per kilowatt-hour for an average annual bill of \$52.60. A total of 842 operating systems were reported in service as of the end of the year, servicing 1,391,100 customers, as compared with revised figures for 1944 showing 826 operating systems servicing 1,216,798 customers as of the end of 1944. A total of 453,900 miles of line were in operation at the close of 1945, as compared with 410,471 at the end of 1944, and 390,058 at the end of 1943. The number of generating plants increased from 65 at the end of 1944 to a total of 74 at the end of 1945, with the corresponding plant capacity of 94,600 kilowatts as compared with 76,500 kilowatts at the end of 1944, and 73,200 kilowatts at the end of 1943.

REA systems were reported to have generated 251 million kw-hr, and to have purchased an additional 2,350 million kw-hr to make up a total REA system input of 2,601-million kw-hr, approximately a 13 percent increase over 1944. The average number of customers per mile of line increased from 2.9 for 1944 to 3.07 for 1945.

Public funds that had been allotted to REA by the end of 1945 amounted to approximately \$668,950,000, representing \$595,200,000 in distribution lines, \$61,450,000 in generating and transmission facilities, and \$12,300,000 in consumer facilities. The revised total allotment for the end of the calendar year 1944 was reported as \$517,699,947. The Rural Electrification Administration started to move its offices and operating staff back to Washington from St. Louis, its wartime location dictated by Washington congestion.

TABLE 5—REA ESTIMATES OF U.S. FARMS YET TO BE ELECTRIFIED

	Farms without Central Station Electric Service, July 1, 1945		Allocation for Loans During Fiscal Year Ending June 30, 1946
	Number	Per Cent	
Alabama	165,346	71.3	4,904,679
Arizona	10,218	55.3	303,098
Arkansas	175,224	80.9	5,197,691
California	10,458	7.9	310,217
Colorado	26,136	50.8	775,276
Connecticut	1,863	8.8	55,262
Delaware	3,744	41.6	111,059
Florida	40,048	64.3	1,187,949
Georgia	138,033	63.9	4,094,490
Idaho	9,563	21.9	283,668
Illinois	90,639	42.5	2,688,636
Indiana	49,049	26.6	1,454,947
Iowa	84,718	39.7	2,513,001
Kansas	112,727	72.1	3,343,835
Kentucky	187,394	74.1	5,586,692
Louisiana	118,857	79.2	3,525,670
Maine	15,380	39.5	456,219
Maryland	15,325	36.3	454,587
Massachusetts	4,197	13.2	124,496
Michigan	30,289	16.1	898,466
Minnesota	104,851	53.1	3,110,208
Mississippi	236,592	81.3	7,018,058
Missouri	183,250	71.6	5,435,768
Montana	30,473	72.9	903,924
Nebraska	84,012	69.4	2,492,058
Nevada	1,713	47.9	50,813
New Hampshire	2,704	16.3	80,209
New Jersey	1,535	5.9	45,533
New Mexico	26,705	78.3	792,154
New York	32,038	20.9	850,347
North Carolina	171,926	61.8	5,099,862
North Dakota	67,712	91.5	2,008,550
Ohio	49,183	21.0	1,458,021
Oklahoma	143,287	79.7	4,250,340
Oregon	12,429	20.1	368,683
Pennsylvania	52,827	31.3	1,567,014
Rhode Island	64	2.3	1,899
South Carolina	80,458	58.5	2,386,636
South Dakota	64,154	88.5	1,903,008
Tennessee	184,267	74.4	5,465,935
Texas	273,102	65.3	8,101,059
Utah	5,411	21.3	160,507
Vermont	7,782	33.0	230,838
Virginia	114,635	65.5	3,400,432
Washington	13,386	16.4	397,071
West Virginia	65,732	66.2	1,949,817
Wisconsin	62,285	33.4	1,847,568
Wyoming	9,468	63.0	280,850
United States	3,371,189	55.3	\$100,000,000

A total of 30,900 miles of rural lines were completed by private electric utilities against 10,933 in 1944, 3,962 in 1943, and 4,660 in 1942. A total of some 57,000 miles of rural lines is scheduled for 1946. The largest percentage of the 1946 mileage is scheduled for the New England states, with the South Atlantic, the West North-Central, and the West South-Central regions following. The reported 1945 rural-line construction budget was \$45,928,000; the estimated budget for 1946, \$80,507,000.

Government. As 1945 opened, Federal control of utility operation under war regulations administered by the Office of War Utilities of the War Production Board, were more rigorous than ever. After considerable heavy debate, a "brown-out" order was issued, drastically limiting the use of electric power for display purposes in most, although not all, areas of the U.S. The purpose was to conserve fuel where it was most critical. This brown-out order was lifted with the announced surrender of Germany. OWU reported that in the 3 months and 8 days during which it was effective, a total of 500,000 tons of coal had been saved, at a time when savings were critical. The industry calculated its contribution to the brown-out was a total reduction of more than \$48,000,000 in gross revenue for the period involved.

Almost immediately after the collapse of Germany in May, OWU progressively relaxed the various restrictions and limitations as rapidly as war and general industry conditions permitted. Essentially all controls were lifted immediately after the collapse of Japan in August. During the last week in September, OWU officially closed its doors, after 4½ years during which it and its predecessors had almost complete control over the broader phases of construction and operation of electric and other utilities.

The Tennessee Valley Authority stated at the end of 1945 that during the preceding year it had "produced more electric power than any other integrated power system in the U.S.," that its revenue for power sales exceeded \$39,000,000, and that its net income for the year was nearly \$18,000,000 or about 27 percent higher than for 1944. About three-quarters of the TVA power output went to war purposes, including such war industries as the huge atomic bomb plants at Oak Ridge, Tenn.

Reflecting a resurging interest of government agencies in the development of electric power, various proposals for "valley authorities" using the TVA as a model were discussed officially and semi-officially in Washington. Several proposals, including a huge proposed "Missouri Valley Authority," were before Congress at the end of the year. The attitude of the Administration was revealed in President Truman's statement in a Congressional message entitled "Public Works and National Resources": "... I hope that Congress will proceed as rapidly as possible to authorize regional development of the natural resources of our great river valleys. . . . We must harness our streams for the general welfare; we must rebuild and reclaim our land. . . . This is not only to provide men and women with work, it is to assure to the nation the very basis of its life. . . ."

With reference to such impending development of electric power with public funds, the electric utility industry promulgated a four-point policy:

1. All intended purposes—including flood control, navigation, irrigation, or power—should be revealed to the public when a government river project is proposed.

2. If power is produced at government-built

dams it should be sold to existing power systems without special privilege or discrimination, to avoid expensive duplication of facilities.

3. Any savings by this plan should be passed along to the users of electricity, under regulation by state commissions or other properly constituted regulatory bodies.

4. Government in any business endangers all business, because of government's inherent special privileges. Government should properly regulate business in the public interest, but should not operate business—the power business any more than the grocery business."

The year-end found the Federal Power Commission as one of the various Federal government agencies subject to the unknown possibilities of the President's reorganization program. The Commission's status as an independent agency, which it had enjoyed for 25 years, was considered to be in jeopardy, especially in view of the growing authority of the Department of the Interior.

1945 was a year of considerable conflict between the Federal Power Commission and the various State commissions. Usurpation of authority continued to be charged against FPC. In Arkansas, the Arkansas Power and Light Company requested a U.S. District court to decide between conflicting orders issued by FPC and by the State Public Service Commission, and the State Legislature endorsed an action of the State Commission against FPC. The New York State Commission challenged FPC authority in attempting to assert jurisdiction over seven gas utilities in New York State. In Montana, the State Commission attacked FPC conduct in a rate case of the Montana Power Company. In Maryland, the State Commission rejected FPC's theory of original cost in favor of determination of a fair value. In Connecticut, FPC efforts to bring Connecticut Light and Power Company under its jurisdiction as an interstate utility were stopped by a Supreme Court decision. Constitutionality of the famous "death sentence" clause of the 1935 Holding Company Act finally was argued before the U.S. Supreme Court in November, 1945. Although the court had not given its decision by the year-end, qualified observers expected the court to uphold the Act.

G. ROSS HENNINGER.

ELECTRONICS. Here is an industry that has come out of the war bearing gifts—many of them strange and fascinating, some of them dreams of the future, more of them down-to-earth practical tools that will serve the modern world and its industries.

Great improvements in aircraft radio, in mobile radio and in radio for use at sea are being founded on these same radio developments for war. Newly designed battle announcing systems insure vastly improved public address systems for peacetime use. Radar and intensive microwave development have set the groundwork for possible revolutionary improvements in radio and television broadcasting, and a host of other developments, large and small, are in great part the legacy of war's speeded-up engineering and research processes.

Industrial electronics likewise profits from war-accelerated research and production, with electronic heating, supersonic testing, and electronic welding of glass constituting just a few of the new developments to achieve prominence in 1945.

Radar. This now famous new word comes from the descriptive phrase "radio detection and ranging." Radar was the basis of the defense against aircraft attack, the new dimension in sea warfare that made possible whole naval engagements in

which not a single enemy ship is seen visually, and a long secret factor that made all-weather bombing possible.

As one of its achievements having commercial applications, radar at an airport can spot a plane 20,000 feet up in the clouds and 20 miles away, and provide to a radio operator in an airport control tower such accurate position information that the ground operator can guide the pilot to a safe landing entirely by radioed instructions.

Radar will be applied commercially to aviation and navigation, for it is a new all-seeing eye for the pilot, whether in the cockpit of a plane or on the bridge of a ship.

Radar Countermeasures. First came radar—then radar countermeasures for blinding enemy radar. These were of two general types: aluminum foil called window or rope, and electronic detectors and jammers.

Approximately 20,000,000 pounds of aluminum foil was dropped in Europe alone. It is an excellent radio reflector, returning a relatively strong radar echo in proportion to its size.

The strips are only a tiny fraction of an inch wide and a few inches long. A bundle of 6,000 strips weighs six ounces, and scattered from a plane, looks to a radar like three heavy bombers.

Electronic jammers operate on the simple principle of radio interference, creating false patterns that blot out desired targets on enemy radar screens. Electronic jamming of German radar from England was made possible by a new super-power high-frequency electronic tube called the *resatron*, which can by itself deliver 30 kilowatts of power continuously at a frequency of 500 megacycles.

The equipment consists of oscillators, noise modulators, and power supplies mounted in trucks, and a huge 150-foot long radiating horn constructed of chicken wire supported on telegraph poles.

Guided Missiles. Pilotless B-17 bombers loaded to capacity with dynamite and directed by radio, radar and television were hurled at very low level directly against U-boat bases. Each carried 11 tons of Torpex, an explosive many times more powerful than TNT. A pilot and co-pilot took each plane up to 10,000 feet over Britain and bailed out. Control of the bomber was then taken over by a mother plane, using radio to guide the giant bomber, radar to watch it through clouds, and television in the nose of the bomb-carrying plane to aid in aiming it at the target.

The first fully automatic guided missile, having the code name *Bat*, was directed by radar echoes from its target. Launched from Navy patrol bombers flying outside the range of the intended victim's guns, the *Bat* became completely automatic when released. Evasive maneuvers of the target ship were promptly followed. In using the *Bat*, the crew of the mother plane located the target, aimed the bomb initially at a particular ship or other target, and pushed the release button. The radar-guided bomb is approximately 12 feet long, has a 10-foot wing span, and carries a heavy explosive load. Its speed is comparable to that of a plane and its range great enough to allow the mother plane to operate well out of the enemy's longest-range anti-aircraft fire.

The *azon* bomb is a standard 1,000-pound demolition bomb with a radio brain that enables the bombardier to guide it by remote control. The accuracy of the bomb was particularly high. On seven missions in Burma fourteen bridges were destroyed by 150 *azon* bombs.

The Ghost Hellcat, a standard aircraft with complete radio control, was used as a target for the heavy anti-aircraft guns of the Fleet. Radio equipment moves ailerons, flippers and rudder, controls the throttle and power setting, retracts and extends the landing gear, sets the flaps, steers the tail wheel, works the wheel brakes individually, makes automatic fuel tank selection, and operates a smoke recognition device and fighting lights for night patrol. This pilotless plane is capable of taking off from a runway 150 feet wide by 2,000 feet long.

Drones are large powered model airplanes maneuvered entirely by radio from the ground, and used extensively as targets in training gun crews for light automatic anti-aircraft weapons.

The early TDD-3 drone is launched by catapult and recovered by parachute. It has a speed of 140 miles an hour, a 137-inch wing span and no landing gear.

The fast KDR-1 standard drone can also serve as opponent in dog-fight training of fighter pilots. Its 35-horsepower engine develops a top speed of about 190 miles an hour.

The TD2C-1 Kamikaze drone is capable of simulating high-altitude bombing runs, dive-bombing tactics, torpedo attacks and 300-mph suicide dive attacks.

The KDN-1 jet drone is regarded as a formidable sparring partner for fighter pilots and anti-aircraft gunners. Its 9.5-inch turbo-jet motor can provide speeds greater than 400 miles an hour in level flight. It is launched from a patrol plane.

Loran. An electronic system of navigation, a wartime military secret, makes available to commercial airlines and to surface craft the same exact navigation that carried military planes safely and directly to and from their targets in fair or foul weather. Harbor approaches may often be made at full speed under certainty of position within a few hundred yards. In rescue operations at sea, both the distressed ship and the rescue ship will be assured of exact position-finding regardless of weather conditions. (See SHIPPING.)

Proximity Fuze. The VT fuze, also called the proximity fuze because proximity to a target sets it off, is a self-powered radio transmitter and receiver small enough to fit into the nose of an anti-aircraft shell and tough enough to stand the terrific shock of firing. When the shell is fired, the shock smashes a glass container of electrolyte, which the spin of the shell forces into the plates of a battery. Current flows; the radio tubes light up; the transmitter broadcasts a continuous wave. When part of this is reflected back from an airplane 70 feet away, it interacts with the transmitted wave and trips an electronic switch, which shoots a current through the detonator. The shell explodes at the ideal distance for maximum effect. Similar fuzes were made for bombs, to explode them above ground.

Shoran. This was the most accurate system of bombing developed. Pinpoint accuracy permitted fragmentation bombs to be dropped through heavy overcast from 20,000 feet, to fall with demoralizing effect on invisible enemy troops entrenched only 400 yards from American lines. With shoran (*short range air navigation*) a bomb could be aimed at a 30-foot bridge invisible to the bomber because of overcast, and yet hit the bridge with greater precision than by visual bombing.

Radio Buoys. Anrac, which means aids navigation radio control, is a remote radio control system whereby the operator turns lighthouse lamps, foghorns, electric bell strikers and other navigational aids on and off by pressing a button miles away.

This remote control allows operation of aids only when they are necessary, thus conserving power.

The system consists of a control station transmitting specially coded ultrahigh-frequency signals to special receivers on buoys and other aids. The receiving equipment converts the signals to d-c pulses which open and close electric relays or gas valves to extinguish or relight lanterns or to trigger strikers.

Huff Duff. A radio direction finder of almost unlimited range, which Navy personnel call "Huff Duff," was revealed in 1945. The device is a high-frequency direction finder whose long range helped the Navy battle German submarines in the Atlantic, even more effectively than radar. In one instance, a 15-second message was picked up by 26 direction finder stations on both sides of the ocean.

Spherics. This is the name given to a new electronic technique that enables weather forecasters to plot the locations of distant storm centers across thousands of miles of ocean through the long-range detection of static electricity in thunderstorms, cloud masses, or rainfall. The term is a contraction of atmospheric, the word meteorologists use to refer to atmospheric electricity or static.

Spherics is based upon the principle that most atmospheric disturbances are accompanied by spheric discharges. When these are detected from a distance, they may be assumed to indicate the existence of a storm. The locations of spheric impulses are determined with a new type of radio direction finder that consists essentially of two crossed loop antennae, powerful amplifying circuits, and a cathode-ray oscilloscope. Flashes of light appear on the fluorescent screen at positions corresponding to the direction of the static source. When the direction of a static source is determined from two or more receivers, location of the storm may readily be plotted on a map by means of triangulation.

Industrial Applications. Just as electronics revolutionized warfare, so has it affected industry. The electron tube has brought new meaning to the word automatic in mechanical and electrical operations. No task is too heavy, too fast, or too precise for the tubes. They open doors; fire and dangerous fumes are detected by them. They sort, weigh, inspect, detect foreign material and flaws, and gage and count hundreds of items in factories.

In 1945, many useful applications of electronics were made in industry. One of the most spectacular of these, the first commercial vulcanizer in the rubber industry, was the installation of electronic heating equipment for the manufacture of Foamex mattresses at the Fall River, Mass. plant of Firestone Tire and Rubber Co. The machine is three stories high and uses 125 kilowatts of radio-frequency power to service two complete vulcanization chambers.

Double-bed mattresses that formerly required a 35-minute cure by the steam jacket method are completely cured by radio energy. In the conventional steam method, the foamed rubber is vulcanized slowly from the outside of the mattress to the interior. In this method, the process cannot always be precisely controlled. Parts of a steam-cured mattress may be completed and other parts of the same product under-cured. In the electronic method, heating is effected instantaneously and uniformly in all parts of the mattress, and close examination shows the final product is far superior to the old type.

Supersonic Inspector. Flaws and internal blisters only 0.001-inch thick in sheet steel, plywood, safety glass, plastics, automobile tires, and a host

of other materials can be detected and marked for rejection by a new electronic inspecting device that sends supersonic vibrations as rapid as 1,000,000 per second through the material under test. Piezoelectric crystals feed the supersonic energy in at one side of the material and pick it up on the other side. Detection and identification of a flaw may be indicated by a signal light or bell, on a meter, or with a relay which energizes a marking mechanism.

Electronic Blanket. A new electrically heated blanket is operated and regulated by electronic control. Two parallel conductors run throughout the interior of the soft, woolen bed cover, one serving as a heating element, the other as a sensitive feeler which operates through three electronic tubes in a control box to hold the blanket's temperature automatically to any desired degree of warmth.

Metal Heating. High-speed electronic heating on a production line has been established for case-hardening finished bearing pins to a depth of 0.025 inch. The pins are fed automatically through a glass tube and quenched with water as they leave the heating coil at a rate of 75 pins per minute. An electronic generator heats the surface of each pin above its critical temperature in less than one second. At this speed, the heat cannot penetrate into the core and only a thin surface layer undergoes change in physical state. The central portion of the pins retain all their original toughness and strength.

Sorting. By spraying electrical charges on low-grade ore, which contains only one and one-half percent tin, a new electronic ore separator extracts the metal from rock and sand, and concentrates it into an ore containing approximately 70 percent tin—suitable for smelting.

The ore is ground to the fineness of sand, dried, and then poured into a trough at the top of the separator. The particles of sand, rock and tin trickle onto a rotating metal drum, where they receive high-voltage electrical charges from a series of fine wires a short distance from the drum's surface. The tin particles are good conductors of electricity and the electrical charges seep through them and into the metal drum. The particles thus lose their charges before the drum has made more than one half turn and fall off the drum. The non-conducting sand and rock particles retain their charges and cling to the drum until pulled off during the second half revolution—by a series of oppositely charged wires. The electrostatic separator can sort mixtures of any two materials provided one component is a conductor of electricity and the other an insulator.

Highly polished steel balls, all within 1/20,000th of an inch of the same size, are sorted into groups of as many as ten size selections automatically by an electronic gage developed in 1945. The balls in any one group differ in diameter by only ten millionths of an inch, a precision more than adequate for the finest ball bearings. One operator handles four machines and sorts more balls than 32 skilled operators could do with conventional measuring equipment. The operator merely fills a hopper, and removes the sorted balls from their individual containers a few seconds later.

Snapshots. X-ray equipment which makes possible millionth-of-a-second x-ray photographs was used extensively in connection with the atomic bomb experiments. The new technique also contributed to the science of ballistics during the war by making possible such studies as determining the realignment of a bullet as it zipped down the bore of a gun barrel. Pictures of the swelling,

bursting and disintegration of a high explosive shell as it chewed through steel plate could also be obtained. Photographs of the original missiles were compared with several high-speed sequence pictures made as the bullet raced down the bore of the gun or as it entered the steel plate.

Typical of the amazing discoveries uncovered by high-speed x-ray pictures in ordnance experiments was one which cleared up the mystery of why certain armor-piercing bullets failed to penetrate. The reason, the pictures disclosed, was that the cap on the bullet, designed to break up the case hardening on the armor plate at the point of penetration, ripped free of the bullet after it left the barrel. Later the bullet caught up with the cap and shattered it just prior to reaching the target.

Electronic Eyes for Blind. Blind persons will be able to determine the color of traffic lights and detect the distance, within one foot, of obstacles, by an electronic device that is carried like a lunchbox and turned from side to side to scan the path ahead. The device projects a beam of light that is reflected by objects within a 20-foot radius. The reflection is detected by a photoelectric cell which creates coded tone signals in an earphone. The handle of the case is parallel to the direction of the first light ray, and the blind user can sense the position of his hand in determining the direction from which reflections are received. Development of the device was initiated by the Signal Corps as an aid to blind war veterans.

Television. The new supersensitive television camera tube called the image orthicon, developed in RCA Laboratories, was demonstrated in an exhibition showing how television has acquired an electronic eye so sensitive that it sees in candlelight, moonlight and twilight, or even in darkness with the scene illuminated by infra-red rays. This achievement solves major problems in television programming and in outdoor pickups, making possible 24-hour news coverage.

Pulse Time Modulation. A new technique known as pulse time modulation promises to improve telephone and telegraph service still further, by making use of an interesting fact about the human eye and ear. A motion picture is made up of a series of separate pictures, run off so fast that we see them as continuous and moving. On the same principle a series of pulse-like signals is sent out by the transmitter, with intervals of silence between the pulses. When these separate pulses are recombined in the receiver we hear them as a continuous sound. The result is that the transmitter is used for only an infinitesimal fraction of time to send a particular voice or program, and the time between pulses is available for additional signals. As many as 24 telephone messages can be transmitted at the same time by one transmitter on a single band of frequencies.

Citizen's Radio. In 1945 the Federal Communications Commission opened the way for wider use of certain special types of communication services which have heretofore been available only to a limited extent. One of these which has dramatic possibilities is Citizen's Radio, known during the war as a walkie-talkie and in a smaller version as a handie-talkie. By this plan, citizens may share frequencies on a cooperative basis and talk with one another by means of a portable device equipped with both a transmitter and receiver.

Highway Radio. This will provide two-way voice communication to drivers of motor vehicles. Citizens may for the first time have telephones in their automobiles, trucks or other moving units, which may connect with the general telephone system.

The subscriber to this service will have his car so equipped that he may talk with any one of the millions of telephones in the country or be called by any one of them.

Special operators at the central telephone office will handle calls to and from motor vehicles. If the driver of a moving van wishes to communicate with the manager of his company, he picks up his telephone and simply pushes a button which signals the operator in charge of vehicular service. She takes the number and, by way of wire, the signal travels to the party called. On the same principle, the manager may call his driver. He calls the operator and gives her the number of the van. She then sends out the signal on the proper radio channel by dialing the code number assigned to the vehicle. An audible or visible signal indicates to the driver that he is wanted. This service may be extended to include intercity trucks and buses as well as trains. Eventually two-way voice communication may be furnished to connect passengers or crewmen on trains, large buses, and even air lines with any telephone in the country.

Railroad Radio. Tests have proved that radio and communication from front to rear of trains, from train to train, from railway station to train can be used effectively. With radio, train crews will have an efficient means of instantly communicating with one another, thereby improving service, reducing the hazards of travel and saving life and property.

JOHN MARKUS.

EL SALVADOR. A republic of Central America. Area: 13,176 square miles. Population: 1,880,000 (1943). Capital: San Salvador.

Although much of the country is volcanic highland, there are fairly extensive lowlands along the Pacific coast and in the valley of the Rio Lempa, which cuts across the highlands. The mean annual temperature at San Salvador is about 73 degrees, while the mean annual range of temperature throughout the country does not exceed 50 degrees. Heaviest rainfall occurs between May and November.

Government. El Salvador's Constitution of 1939 provided for a centralized republic of 14 departments, with a unicameral legislature, the National Legislative Assembly, of 42 members. The Assembly met regularly twice a year, Feb. 15 to May 15, and Oct. 15 to Jan. 2. The President was directly elected and was assisted by a Cabinet of 5 members. An amended version of the Constitution of 1886 was adopted on Nov. 30, 1945, to replace the 1939 Constitution. The President is Salvador Castaneda Castro.

The People. El Salvador is the most densely populated country in Central America. Inhabitants per square mile range from 87.4 in the Department of Chalatenango to 292.2 in the Department of San Salvador. Mestizos constitute 80 percent and Indians 19 percent of the total population. The largest cities are: San Salvador, 105,000; Santa Ana, 48,000; and Nueva San Salvador (Santa Tecla), 24,000.

Spanish is the official language, Roman Catholicism the predominant religion.

According to the census of 1930, 21.2 percent of the population is literate. In 1941, 89,792 students were enrolled in 1,330 primary schools; 3,309 in 58 secondary schools, and 506 in the National University.

National Economy. El Salvador is primarily an agricultural country. Coffee is the principal export crop, but substantial quantities of corn, sugar, beans, rice, cotton, and henequen are raised for

domestic use. The 1944-45 coffee crop was estimated at 920,000 bags (of 60 kilograms each).

Gold and silver are the principal mineral products of El Salvador. In 1944 gold production amounted to 23,110 troy ounces valued at \$799,393; silver production totaled 276,284 troy ounces valued at \$122,645. There is little manufacturing, but a number of small industries are engaged in processing agricultural products, and produce manufactured articles for the domestic market.

Foreign Trade. Coffee is the chief export product of El Salvador, which ranks third among the coffee-exporting countries of Latin America. In 1944-45 coffee exports totaled 997,539 bags of 60 kilograms each, of which about 90 percent went to the U. S. Gold and silver rank second in importance in the country's export trade. Other exports are sugar, rice, and henequen sacks. In 1943 coffee represented 87 percent of the value of total exports; gold and silver accounted for 6 percent. The U. S. is the most important market for El Salvador's exports, and took 80 percent of the total in 1943.

The U. S. is the leading supplier of Salvadoran imports, and in 1943 provided 69 percent of the total imports. Manufactured and semi-manufactured products, foodstuffs, and beverages form the major imports of the country.

In 1942 imports amounted to 21,432,000 colones, and exports totaled 44,928,000 colones.

Events, 1945. El Salvador opened the year with elections in prospect for Jan. 14-16. A President and Vice President, and three deputies and three alternates from each department were to be elected. Originally there had been six presidential candidates in the race. Three dropped out before the end of 1944. On Jan. 7 Napoleón Viera Altamirano, candidate of the Republican Social Front, announced his withdrawal, and Antonio Claramount Lucero followed suit a few days later. This left only Salvador Castaneda Castro, who had the backing of the Osmín Aguirre Administration.

Both Viera and Claramount charged that the administration intended to impose the election of Castaneda Castro. Provisional President Aguirre denied this in a broadcast on Jan. 11. He promised to guarantee free and impartial elections; declared that the Government had tried to prevent the withdrawal of all other candidates and was not trying to force Castaneda Castro on the country; and added that he would suppress any attempt against public order.

The election was held without incident. Castaneda Castro and his Vice-Presidential running-mate, Adriano Villanova (a last-minute substitute for former Ambassador to the U. S. Hector David Castro), received 312,754 votes, Provisional President Aguirre received 2,030, and all former candidates received a total of 1,050.

The exiled oppositionist, Arturo Romero, called upon all the American democratic governments not to recognize the Government of Castaneda Castro, "born by the imposition of bayonets." But prominent members of the Democratic Union of Central America, which had been opposed to the Aguirre regime, expressed the belief that the election had been legal and voiced the hope that the new administration would achieve peace and progress. And the President-elect, in a post-election statement, declared that he would establish a Government of conciliation, develop public instruction, tolerate no obstruction to peace and public order, and conduct no political persecution. He invited all "good" Salvadorans living outside the country to return. The Communists were excluded from the proffered amnesty; Castaneda Castro said he would

govern democratically with the collaboration of all but the extreme leftist parties. A provisional National Assembly was inaugurated on Feb. 1, to function until the new Administration took office on Mar. 1; at that time it became a Constituent Assembly and started to draft a new Constitution.

There were rumors of unrest at various times during the month, and on Feb. 13 the Minister of the Interior admitted that there had been some minor revolutionary movements against the Aguirre regime.

The provisional Government had not been recognized by the other American republics nor had it been invited to the Mexico City Conference. The inauguration of Castaneda Castro brought general recognition, however, and a Salvadoran delegation was seated at Mexico. The Salvadoran Government-in-exile had ceased to exist the day before.

In his inaugural address, Castaneda Castro pledged that freedom of expression and other civil liberties would be fully guaranteed and that there would be "effective conciliation without partisanship." In the field of foreign affairs, he said he would seek to "maintain and intensify our cordial relations with Central American countries as well as the rest of the continent."

There were two attempted revolts against the new administration during the summer. A Government communiqué on June 10 disclosed the shooting down of an airplane used by discontented army officers to bomb and machine-gun national police barracks. The Constituent Assembly imposed a state of siege, but the official statement claimed that the Government had known of the uprising in advance and that complete order prevailed throughout the nation.

The Government announced on July 31 that "13 army officers of low rank" were involved in a plot which had been frustrated the week before. They were said to have been backed by civilian elements opposed to the administration and to have had money and a quantity of hand grenades. The authorities also seized a clandestine radio station, said to be broadcasting "subversive propaganda and alarmist reports" in the town of Santa Ana. The rebels were reported to be using food scarcities and unfavorable economic conditions as reasons for overthrowing the Government.

At the end of November the Constituent Assembly abandoned its attempts to write a wholly new constitution and restored instead an amended version of the 1886 Constitution. Important amendments included a law against reelection of the President after a four-year term; legal recognition of certain autonomous institutions set up with public funds; provisions for labor arbitration; postponement of election of mayors until 1946; establishment of social security and minimum wage laws. President Castaneda Castro hailed the work of the Assembly as "opening the door to interior peace," and pledged himself to a policy of national consolidation "in the democratic spirit."

During November, a Central American-Mexican coffee parley was in session in San Salvador. Its apparent purpose was to set up a federation which would serve as a hemisphere "coffee front" to work for changes in United States price and import policies. All the coffee-producing countries of Latin America had been agitating for a higher price, claiming that increased production costs were making the coffee industry uneconomical. A subsidized 3-cent-a-pound increase authorized by the U. S. failed to satisfy them.

Relations with Guatemala preoccupied the Salvadoran Foreign Ministry during much of the

year. Provisional President Aguirre had closed the Guatemalan-Salvadoran border and in retaliation, Guatemala halted all railroad traffic, thereby setting up a virtual economic blockade which prevented the export of Salvadoran coffee and the receipt of urgently needed imports. Late in January Guatemalan newspapers described the situation as extremely tense.

It was improved by the new Salvadoran Administration, however. The border was reopened on Mar. 10, and on May 17 the Presidents of the two countries held a cordial meeting at the border, and brought up the old project for a union of Central American countries, on whose "urgent need" they agreed. Both Presidents made simultaneous broadcasts on May 22, in which they explained that the political sovereignty of each country would be preserved under their plan but that they would be drawn together culturally and economically. On June 22 Guatemalan and Salvadoran commissioners were reported to have signed an economic-financial protocol leading toward gradual fusion of their economic life. There was opposition to union however, both within Guatemala and El Salvador, and in the other Central American states, and no further progress seemed to have been made by the end of the year; a projected second meeting of the two Presidents was never held.

HARRY B. MURKLAND.

EMERGENCY MANAGEMENT, Office for (OEM). The Office for Emergency Management was established in the Executive Office of the President by administrative order of May 25, 1940. The agency is primarily a framework within which various civilian war agencies have been established, and during the war it served as an important means of organizing the war program. It was subjected to many changes in organization during the last half of 1945 and now consists of the following: the Committee on Fair Employment Practice, the Office of Alien Property Custodian, the Office of Defense Transportation, the Office of Scientific Research and Development, and the War Shipping Administration. Chairman: Malcolm Ross.

EMPLOYEES' COMPENSATION COMMISSION, U.S. An independent bipartisan agency of the U.S. Government which administers the legislation providing workmen's compensation benefits for civil employees of the United States and covering also private employment within the jurisdiction of the Federal Government. Chairman: Mrs. Jewell W. Swofford.

ENGLAND, Church of. The most important religious event of a year of reports and planning was the publication on June 19 of *Toward the Conversion of England*, the final report of the Archbishops' Commission on Evangelism. The report analyzed the spiritual and psychological needs of the age with special reference to postwar England; stressed the limitations of scientific education; pointed out the need for evangelism by trained laymen; and advocated the use of modern propaganda media, including cinema, drama, radio, television, press, literature, Christian information and publicity centers, and advertising.

Apart from the solemn observances of V-E Day and V-J Day; from the enthronement on April 19 of Dr. G. F. Fisher as Archbishop of Canterbury and Primate of All England; and from the extensive arrangements for welcoming back demobilized men and women to their parishes, the chief events were the publication of three other reports.

The final report of the Financial Commission, which was published on September 18, and presented to the Church Assembly in November, proposed that a special committee should be appointed "to investigate the possibilities of combining all those bodies, including the Ecclesiastical Commissioners and Queen Anne's Bounty, which deal with the financial resources of the Church centrally, into one Treasury," so that control of the central resources of the Church should be "vested in a body upon which there would be adequate representation of the Church Assembly, combined with considerable saving in administrative expenses."

Other recommendations included a minimum of £500 per annum for beneficed clergy "where the work and responsibility justify it"; a Central Appeals Advisory Committee; and a proposal that at least £1,000,000 for Church Training Colleges should be included in central needs during the next ten years.

In October the Archbishop of Canterbury assigned an over-riding priority to the need to raise £600,000 for the training and assistance of ex-Service and other candidates for the Ministry, of whom 4,000 were then on the register. It was revealed that the appeals launched by 34 dioceses totalled £11,410,000.

The Report *Training for Service* recommended a new central theological college for women; a Refresher College for voluntary workers; and a determined effort to recruit women, especially university graduates and holders of responsible posts in national service, for Church work.

Saving the Art Treasures of the Church, the 9th Report of the Central Council for the Care of Churches, revealed that, save in a few special categories such as Renaissance architecture, the destruction of the Church's art treasures during the course of World War II was far less than had been feared.

Dr. J. W. C. Wand was translated from the bishopric of Bath and Wells and appointed Bishop of London.

During December, Archbishop Lord Lang of Lambeth, a former Primate, died.

Events of the year included a decision to raise £250,000 for Christian Reconstruction in Europe; an appeal by the Archbishops of Canterbury and York on October 10 for £100,000 for the Anglican Church in China, which had turned to the Church of England for help; and an intensive campaign to recruit missionaries—including teachers, doctors, nurses, radiologists and other technicians—for the Church overseas. It was decided to re-build Coventry Cathedral in association with an inter-denominational centre for Christian social work.

ENGRAVING AND PRINTING, Bureau of. A Bureau of the U.S. Department of the Treasury which designs, engraves, and prints the U.S. currency and other engraved work for governmental use. Director: Alvin W. Hall.

During the fiscal year ended June 30, 1945, the Bureau delivered 842,229,242 printed sheets, of which 117,795,283 were currency aggregating \$8,436,340,000 in face value and weighing 2,800 tons.

ENTOMOLOGY AND PLANT QUARANTINE, Bureau of. A Bureau of the U.S. Department of Agriculture, which studies insects that are injurious or beneficial to agriculture and forestry, develops new insecticides and fungicides, etc., and enforces quarantine and restrictive orders issued under the Plant Quarantine Act. Chief: P. N. Annand.

ERITREA. An Italian colony on the west shore of the Red Sea, incorporated in Italian East Africa on June 1, 1936, but under British Military Administration since its conquest by Allied forces in 1941.

The People and Their Economy. The population of some 700,000 lives in an area of 15,754 sq. mi., though they tend to congregate on the central plateau, where the climate is cooler and moister. On this plateau live the Christian (Coptic) element, racially and linguistically akin to the Ethiopians. In the lower regions dwell various peoples, largely Hamitic and Moslemized. In the cities and towns on the coast Arab communities are found.

The only port of any importance is Massowah. The capital is Asmara (7,765 feet above sea level) where there is still a considerable Italian population. A railway leads from Massowah through Asmara almost to the Sudan frontier. There is also a system of highways, some of them built or improved during the 1935-36 campaign against Ethiopia. After 1941 the Americans and British made good use of Eritrea's communication and industrial facilities for the prosecution of the campaign in Libya. Relatively little trade originates in Eritrea since the colony produces only a few exportable items such as hides and salt. The transit trade—from the Sudan, Ethiopia and lower Arabia—is also of only minor importance.

Events, 1945. The Council of Foreign Ministers which met in London in September was supposed to draft a treaty of peace for Italy. Claimants for the Italian colonies therefore presented their cases at that time. Both Egypt and Ethiopia asked for Eritrea, the latter on historical and ethnic grounds. However, when the Soviet delegation indicated an interest in obtaining a trusteeship for Eritrea, as well as for Libya, the Conference decided to postpone settlement of this issue. Meanwhile the American delegation revealed that it had proposed that Eritrea be given independence after a ten-year interim trusteeship arrangement under the United Nations Organization. Ethiopia, however, was to receive a territorial cession giving her access to the sea at Assab. The Italian Government continued to plead that it not be deprived of its pre-fascist colonial possessions.

The British Military Administration was accused of keeping a number of notorious fascists in office in Eritrea, and of perpetuating some of the racially discriminatory regulations imposed during the Italian regime. On Sept. 25 there took place in Addis Ababa mass demonstrations demanding the return of Eritrea to the Ethiopian "motherland." (See ETHIOPIA.)

ROBERT GALE WOOLBERT.

ETHIOPIA. An empire in northeast Africa, comprising the Abyssinian highlands and adjacent lowland areas to the east, south and west. Its area is around 350,000 square miles—some of the country's boundaries have not yet been delimited exactly. Addis Ababa (population 200,000) is the capital. Other important cities are Harar, Dire Dawa, Gondar and Dessye.

Government. Ethiopia merits the title of empire because it consists of several ancient kingdoms (such as Tigré, Amhara, Shoa and Gojjam) and comprises peoples who are alien in race and culture to the politically dominant Abyssinians of the plateau. The creation of this empire was the work of several generations, reaching its apogee under Emperor Menelik II (1889-1913).

The political and social structure of Ethiopia is still largely feudal, though the present ruler—Emperor Haile Selassie I—has been making some

headway against the entrenched conservatism of the aristocracy and the clergy. At least a nominal modification was introduced into the system of absolute monarchy when in July, 1931, Haile Selassie decreed the creation of a Parliament. This body, first convened in November, 1932, consisted of two houses—a Senate and a Chamber of Deputies—all of whose members were nominated and whose functions were merely advisory. The Senate consisted of 27 members chosen from the hereditary chiefs of the provinces, while the Deputies were selected by the Emperor from among civil and military officials. There was also an Imperial Council, with the Emperor acting as his own Prime Minister.

Ethiopia was overrun by Italian troops in 1936 and annexed to Italy. Eritrea and Somalia were joined to it in order to form Italian East Africa, administered by a Viceroy representing the King-Emperor in Rome. This came to an end when Allied forces reconquered the country and restored Haile Selassie to his throne (May 5, 1941). The boundaries as of 1935 were supposedly also restored, though the territorial provisions of the eventual treaty of peace with Italy may alter them somewhat. After a brief period of British military administration, Ethiopia recovered her complete sovereignty *de jure* and became one of the United Nations. Still under British military administration is the Ogaden and certain "reserved areas" around Harar. Since his return from exile, Haile Selassie has resumed the process of strengthening the central administration, headed by a prime minister. He has also called in numerous experts from Britain, the United States and elsewhere to give advice in various technical fields. He has further sought to create a corps of trained Ethiopians, especially from among the younger men, who will be loyal to him rather than to the feudal chiefs, and on whom he can rely to modernize his state.

During the fiscal year 1943-44 (ending September 10) the Ethiopian budget was balanced at 38,956,058.74 Maria Theresa thalers. Revenues were set at 31,702,599.91 (including a 5,000,000 subsidy from the British Government) and expenditures at 33,472,740.67. The 1944-45 budget contained comparable figures.

A new Ethiopian army is being created to provide a modern defense force that can operate more quickly and effectively than the old provincial feudal levies. It has been trained by British officers, as has the newly formed police force. Equipment consists of old Italian arms, British materiel and Lend-Lease items from the United States. The new army, including regulars and territorials, is said to comprise some fifty battalions.

Events, 1945. The text of the Anglo-Ethiopian Agreement signed on December 19, 1944, was published in London on January 12 as a White Paper (for a brief resumé of the terms of this Agreement see the YEAR BOOK for 1944, page 200). The general reaction of the British press was that the new convention removed most of the objectionable features of the 1942 Agreement and that the Ethiopian Government now enjoyed virtually complete freedom of action in both its internal and external affairs. The principal exception was the continued British military administration of the reserved areas and the Ogaden.

On his return from the Yalta Conference Mr. Roosevelt stopped over briefly in Egypt to confer with several of the monarchs of Near Eastern countries, including the Emperor Haile Selassie of Ethiopia. At this meeting, which took place aboard an American cruiser in the Great Bitter Lake of the

Suez Canal, subjects of mutual interest were discussed. However, the outside world was given only the following laconic official communiqué:

"In talking with the Emperor, the President stressed communications between the United States and Ethiopia and said he hoped, with improvements of communications, particularly by air, the two countries would come to know each other better. The Emperor told the President of the many improvements recently made in Abyssinia and enthusiastically indorsed the President's hope for closer relations.

"The President took advantage of the opportunity to thank the Emperor in person for the site and buildings he and the Empress gave the United States to use as a legation in Addis Ababa."

During his brief visit in Egypt the Emperor also had a talk with Prime Minister Winston Churchill. It was assumed that Haile Selassie took this occasion to reiterate Ethiopia's demands for the annexation—or "return"—of the Italian colonies of Eritrea and Somalia and for a share in any eventual reparations that might be extracted from Italy by the victorious Powers. On this point the official Ethiopian position has always been that Abyssinia was the first of the nations overrun by the Axis Powers and that she was therefore entitled to first consideration in such matters as indemnities and the trying of fascist war criminals. In regard to the latter issue there did not appear to be much chance that Ethiopia would receive satisfaction for her demands that Italian leaders in the war of 1935–36 like Badoglio be haled before an international tribunal.

On the eve of the Big Five Conference of Ministers which met in London during September and October, the Ethiopian Government once again officially pressed its claims to Eritrea and Somalia. At this Conference one of the first items on the agenda was the drafting of a treaty with Italy which would inevitably have involved the future of Italy's East African colonies. However, the Conference was thrown into such an uproar when it became known that Russia was requesting control over Libya and perhaps even Eritrea, that the Ministers decided to put the Italian treaty over until a later meeting, thus leaving the allocation of the East African colonies undecided.

The British were naturally very apprehensive at the possibility that Russia might gain a foothold on the Red Sea along their lifeline to India. As for the United States, the proposals put forward by its delegation for the solution of Italian territorial problems were made public in London on Sept. 22. According to this statement, the United States had suggested that Eritrea be granted independence after a ten-year probation period during which it would be under a United Nations Organization trusteeship arrangement. There was, however, to be a territorial cession which would give Ethiopia access to the sea through the port of Assab. In the case of Italian Somaliland there was no fixed term during which the trusteeship arrangement would run. (See ERITREA, SOMALILAND.)

On Sept. 6 it was revealed by Mr. H. F. Sinclair, President of the Sinclair Oil Corporation, that his firm had obtained a fifty-year concession for the development of oil resources in Ethiopia. During the first five years this concession was to cover the entire area of the country; but thereafter the area in which the Sinclair company would have exclusive rights would be gradually diminished. The corporation was given the exclusive right "to explore, prospect and drill for, extract and render suitable for trade" petroleum and its derivatives,

as well as to dispose of any oil which the company may produce under this agreement.

Among the more unusual features of this contract were the obligations assumed by the Sinclair company to promote the general welfare of the country by devoting part of its profits to the building of schools, hospitals, "clinics, sanitary facilities, research organizations, and other public institutions for the enhancement, education, health, culture and prosperity of the people of the country." The agreement specifically provides that for a period of ten years the company shall spend certain sums for the training and education of Ethiopian subjects in the United States.

Whether any oil actually exists under the soil of Ethiopia has long been a disputed question. It will be recalled that just prior to the Italian invasion of Ethiopia in 1935 an oil concession was granted by the Ethiopian Government to certain American interests, principally the Standard Vacuum Oil Company. Thanks to the intervention of the American State Department and the success of Italian arms, this concession never got beyond the paper stage. If there should prove to be oil in Ethiopia the government of the country will be entitled, under the Sinclair contract, to royalty payments on a stipulated basis for the first five years, and thereafter at an increased rate subject to revision at the end of fifteen years from the date when actual production shall have begun.

Characteristics of the Population. Estimates of Ethiopia's population vary widely, for there has never been a proper census. The actual figure is probably somewhere around eight or ten million.

The Amharas, who have long constituted the ruling element in the empire, probably number less than 3,000,000. They speak various derivatives of the ancient Ge'ez, a Semitic language introduced from Southern Arabia. Amharic, the most widely used of these modern tongues, is the official language of the Imperial Government. However, various other languages are spoken by the majority of the people: Galla, Somali, Danakil, Arabic, etc.

The Amharas are Coptic Christians, as are some of the Gallas. The Somali, Danakil, many of the Gallas, and some of the peoples of southwest Ethiopia profess Islam. A number of pagan tribes are also found in the latter region. The city of Harar is the center of Moslem culture for the entire Horn of Africa.

The Coptic Church is politically powerful and owns considerable tracts of land. The clergy is numerous, and in the aggregate represents a force opposing progress. Hitherto the Abuna, or head of the Ethiopian Church, has always been an Egyptian appointed and consecrated by the Coptic Patriarch of Alexandria. However, the Ethiopian Government announced in May, 1944 (see YEAR BOOK for 1944) that when the incumbent Abuna Qirillos had ceased to reign, his successor would be appointed by the Emperor. The connection between the Egyptian and Ethiopian branches of the Church was severed entirely during the Italian occupation. Non-Christian religions are not only tolerated, but the Government supports several Mohammedan schools.

Elementary education is provided, primarily for boys, by government and mission schools in the principal cities. So great had been the disruption wrought by the Italian occupation that Ethiopia's educational facilities have had to be rebuilt virtually from the ground up. Many of the educated young men were killed by the Fascists as a matter of policy. In September, 1944, there were 79 elementary schools in operation, with 289 teachers.

The six central schools in Addis Ababa had 1,386 pupils, while the four at Harar, Dessye and Jimma had 1,562. In addition there were secondary, teacher training, technical and commercial schools in the capital. Higher education is just getting under way, but considerable progress is anticipated since this matter is very close to the heart of the Emperor.

The Economy of the Country. Ethiopia is far from being a rich country. Few minerals have been found under her soil outside of small amounts of gold and platinum. From time to time explorers and promoters have reported the discovery of deposits of coal, iron and oil (see **EVENTS** above). There is considerable potential water power in the rivers, notably the Blue Nile, but this can be harnessed only by sinking large amounts of capital—and the Ethiopian Government has been loath to open the country to foreign speculators. Several years ago the J. G. White Company of New York surveyed the power resources of the Blue Nile, but the Italian invasion cut short any development at that time. Parts of the ancient forests, for which the Abyssinian plateau was noted, may still be found in some of the more inaccessible regions.

Stock-raising and agriculture form the main occupations of the people. Both are conducted on rather primitive levels except where European influences have made themselves felt. The nature of the products naturally varies according to climate, altitude and other environmental factors. Cattle and sheep are found in the highlands, camels and donkeys in the lowlands. Cereals are raised widely. Very little agricultural produce is exported, each region being largely self-sufficient. The Ethiopian Ministry of Agriculture provided the following estimates in 1945: wheat, 1,700,000 hectares and 420,000 tons of grain; barley, 1,000,000 hectares and 800,000 tons; maize, 1,500,000 hectares and 1,800,000 tons; giant millet, 3,000,000 hectares and 4,500,000 tons; cattle, 12,000,000; sheep and goats, 2,000,000; horses and mules, 2,000,000; camels, 500,000. The principal exports are coffee, hides and skins. Imports consist largely of cloth and other manufactured articles. For 1943-44 the exports were valued at £2,184,108 and the imports at £3,910,090.

Ethiopia, being without a coastline, must find outlets for her meager trade through other countries. The only railway goes from Addis Ababa to Jibuti in French Somaliland, a distance of 486 miles. It is owned and operated by a French company. One of the few benefits conferred by Italian rule was the construction of new roads. In 1935 the highways totalled 2,730 miles. The Italians improved these and added 4,340 more, of which 1,732 were macadamized and 1,401 asphalted. They also built a number of airports, thereby opening up remote and inaccessible parts of the country. One of the problems facing the Ethiopian Government at present is how to keep these roads and airports in repair.

ROBERT GALE WOOLBERT.

EUROPE. A continent with an area of about 2,079,000 square miles (excluding European U.S.S.R.) and a population estimated at 402,550,000 (excluding the population of European U.S.S.R.) on Jan. 1, 1940. See the article on each European country.

EVANGELICAL AND REFORMED CHURCH, The. A denomination formed by the merger in Cleveland, Ohio, on June 26, 1884, of the Evangelical Synod of North America and the Reformed Church in the

United States. The highest judicatory is the General Synod, which meets triennially. A new Constitution was declared in effect at the meeting of the General Synod, held at Lancaster, Pa., in 1940. In 1942 a new Book of Worship and Hymnal were formally adopted by the General Synod while in session at Cincinnati, Ohio. The officers of the Evangelical and Reformed Church are: President, Rev. Dr. L. W. Goebel, 77 W. Washington St., Chicago 2, Ill.; First Vice President, Rev. Dr. John Lentz; Second Vice President, Mr. Edward Dirks; Secretary, Rev. Dr. William E. Lampe, 1505 Race St., Philadelphia 2, Pa.; Treasurer, Mr. F. A. Keck, 1720 Chouteau Ave., St. Louis 3, Mo.

In its combined statistics for the year 1944, the Evangelical and Reformed Church reports a membership of 689,780 in 2,824 congregations. Total expenditures for congregational purposes amounted to \$10,778,625, and total benevolences to \$2,637,857. The Sunday School enrollment is 414,382.

EXECUTIVE OFFICE OF THE PRESIDENT. An office of the executive branch of the U.S. Government which included in 1945 the following divisions: The White House Office; Bureau of the Budget; Liaison Office for Personnel Management; Office for Emergency Management and the War Refugee Board. See separate articles.

EXPERIMENT STATIONS, Office of. An Office of the U.S. Department of Agriculture, whose functions date back to 1888. It administers Federal funds provided under various acts for the support of research in agriculture, the rural home, and rural life by experiment stations in the several States, Alaska, Hawaii, and Puerto Rico. Chief: James T. Jardine.

EXPORT-IMPORT BANK OF WASHINGTON (EIB). Created in 1934, the bank was made a permanent independent agency of the U. S. Government by the Export-Import Bank Act of 1945, approved July 31, 1945. The purpose of the Bank is to aid in the financing of exports and imports between the United States and foreign countries.

The Act of 1945 vested the management of the Bank in a board of directors consisting of the Secretary of State and four full-time directors appointed by the President by and with the advice and consent of the Senate. It also authorized an increase in the limit on outstanding loans and guaranties from \$700,000,000 to \$3,500,000,000 and removed the prohibition on loans by the Bank to governments in default on their obligations to the U. S. Government.

This increase in the lending authority of the Bank has permitted it to extend long-term reconstruction credits to liberated and war-devastated countries to assist them in purchasing from the United States the equipment, materials and services required for the restoration of their economies. Largely because of credits of this type, the cumulative total of authorized loans of the Bank from the date of its creation increased from approximately \$1,200,000,000 at the end of 1944 to more than \$2,300,000,000 at the end of 1945. Disbursements during 1945 were approximately \$80,000,000 and repayments were approximately \$51,000,000. As a consequence, the outstanding loans of the Bank increased from \$225,000,000 at the end of 1944 to \$252,000,000 at the end of 1945.

In addition to its reconstruction loans, the Bank continues to finance the foreign trade of the United States in two other principal ways. It finances specific export and import transactions on applica-

tion of United States exporters and importers, where the nature of the risk involved is such that private credit can not be obtained. It also makes long-term loans to assist in financing the export of United States materials and equipment required for development projects in foreign countries.

AUGUST MAFFRY.

EXTENSION SERVICE. An agency of the War Food Administration, U.S. Department of Agriculture, established under the Agricultural Appropriation Act of 1924. Its functions are educational. An administrative and subject matter staff headed by a State director of extension work is located at each land-grant college, and county extension agents are located in nearly all the agricultural counties. These county extension agents make available to farmers, farm homemakers, and rural youth the results of research conducted by the Department of Agriculture, the land-grant institutions, and other research agencies, adapted to local farm and home conditions.

The Extension Service, as a cooperative educational agency, carried on general wartime food educational programs with rural people and in urban areas where cooperation with other agencies could stimulate food production and conservation as in the case of Victory Gardens. The Extension Service administers and supervises the intra-state aspects of the wartime farm labor program, including direct action through the State extension services in the recruiting and placing of farm labor (men, women, and youth) from local, urban, and interstate sources; the establishment of farm placement centers; the training of workers; and other phases of the emergency farm labor program.

Director of Extension Work: M. L. Wilson.

FAEROES. A group of 21 islands (the chief being Bordo, Kalso, Osterø, Sando, Stromø, Suderø, Vaago, and Videro) north of Scotland, forming a county of Denmark. The islands were under British military control from Apr. 10, 1940, until August, 1945. Total area, 540 square miles. Population (1935 census), 25,744. Capital, Thorshavn (on Stromø), 3,611 inhabitants. The chief exports are fish, whale oil, woolen goods, lambskins, and feathers. The islands are administered by a Danish governor and the local parliament (Lagting). The election held in the Faeroes, according to a report of Nov. 7, 1945, resulted in a victory for the pro-government coalition. This means that the Faeroes will remain with Denmark.

FAIR EMPLOYMENT PRACTICE. Committee on. Originally a Committee established by executive order within the Office of Production Management (see YEAR BOOK for 1941) on June 25, 1941, and transferred to the War Manpower Commission on July 30, 1942. This Committee ceased to exist upon the establishment of a new Committee on Fair Employment Practice within the Office for Emergency Management on May 27, 1943.

The purpose of the Committee is to promote the fullest utilization of all available manpower and to eliminate discriminatory employment practices. Executive Order 9346, by which it was established, provided that all agencies of the U.S. Government include in all contracts a provision obligating the contractor not to discriminate against any employee or applicant because of race, creed, color, or national origin. Federal agencies concerned with training for war production were required to assure that such programs are administered without discrimination. The Committee is empowered to re-

ceive and investigate complaints of discrimination, to conduct hearings, make finding of fact, and take appropriate steps to obtain elimination of such discrimination. Chairman: Malcolm Ross.

FAIR FOUNDATION, The Maurice and Laura. A Foundation which concentrates its funds in support of economic research through grants to research organizations for investigations of specific problems which are basic to the development of American industry, trade and finance. During 1945, payments approximating \$350,000 were made on grants for this purpose. New grants of \$69,100 were voted in 1945. Economic research projects completed during 1945 resulted in the publication by the Brookings Institution, Washington, D. C., of "Postwar Fiscal Requirements," "Should Price Control Be Retained?" and "Labor Policy of the Federal Government"; by the National Bureau of Economic Research, New York, N. Y., of "Labor Savings in American Industry, 1899-1939"; and by the Committee on Postwar Tax Policy of "A Tax Program for a Solvent America." The Foundation was established by Mr. Maurice Falk in 1929 with the provision that principal as well as income should be used within 35 years for such efforts to advance the general welfare as the Foundation's Board of Managers might select. Executive Director: J. Steele Gow. Chairman of the Board of Managers: Leon Falk, Jr. Offices: Farmers Bank Building, Pittsburgh 22, Pa.

FARM CREDIT ADMINISTRATION (FCA). An agency of the U.S. Department of Agriculture (q.v.), established under authority of the Farm Loan Act of 1916 and subsequent acts, to provide a complete and coordinated credit system for agriculture. It makes long-term and short-term credit available to farmers and also provides credit facilities for farmers' cooperative marketing, purchasing, and business service organizations.

The United States is divided into 12 farm credit districts. In one city in each district are a Federal land bank, a Federal intermediate credit bank, a production credit corporation, and a bank for cooperatives. Activities of the four institutions in a district are coordinated through a farm credit board and an executive called the general agent, who acts as joint officer for the four units.

Federal land bank loans are long-term, amortized loans of \$100 to \$50,000 made to farmers who give as security first mortgages upon their farms. Corporations engaged in raising livestock are also eligible to borrow, under certain limitations. The rate of interest for most new loans is 4 per cent. Land bank commissioner loans up to \$7,500 may be made for the same purposes as land bank loans and also to refinance indebtedness. The contract rate of interest is 5 per cent. The 12 Federal intermediate credit banks make loans to, and discount paper for, production credit associations, the banks for cooperatives, State and national banks, agricultural credit corporations, livestock loan companies, and similar financing institutions. The 12 production credit associations provide credit for all types of farm and ranch operations, the loans being made and collected by local associations. The central and 12 district banks for cooperatives make loans to farmers' cooperative associations; loans are of three types—commodity at 1.5 percent interest; operating capital, 2.5 percent; facility, 4 percent.

Emergency crop and feed loans of from \$10 to \$400 in one year are made to applicants who are unable to procure adequate loans from other sources.

es. Regional Agricultural Credit Corporations were organized to provide emergency short-term credit in 1932-33; during 1943 RACC loans were made to finance the production of essential wartime food and fiber, and in 1944 and 1945 loans were authorized in certain regions on all crops and in some regions on specified crops, as designated by the Secretary of Agriculture.

The FCA maintains a Cooperative Research and Service Division, and it also works with other government agencies in meeting wartime problems. Governor in 1945: I. W. Duggan.

FARM SECURITY ADMINISTRATION (FSA). An agency of the U.S. Department of Agriculture, established as the Resettlement Administration in 1935. It has made loans to nearly one million farm families for the purchase of machinery, equipment, livestock, seed, fertilizer, and other supplies. Since the war loans (up to five years at 5 per cent) have been made primarily to increase the production of essential food and fiber. The loans are accompanied by technical guidance from county supervisors. The FSA also aids in the group purchase of machinery and purebred sires and in the setting up of county-wide group health services. Under the Farm Tenant Act of 1937, loans are made for the purchase of family-type farms, \$233,750,000 having been authorized for this purpose up to June 30, 1944. The migratory labor camps originally established by FSA have been turned over to the War Food Administration for the use of seasonal workers, and the resettlement projects are being liquidated by sale of the units to residents. Rehabilitation loans totaling \$3,338,213 had been made to 2,635 veterans by July 31, 1945. The agency was delegated by the Secretary of Agriculture to process loans and grants, totaling \$2,000,000, to farmers whose property was damaged by the floods of 1945.

On instructions from Congress, the agency began liquidation of its 152 rural resettlement projects. By June 30, 1945, 71 projects had been sold or transferred to other agencies. Administrator: Frank Hancock.

FEDERAL BUREAU OF INVESTIGATION (FBI). This Bureau, established in 1908 by Attorney General Charles J. Bonaparte, is the investigative arm of the Department of Justice. It was originally called the Bureau of Investigation, the present name having been adopted in July, 1935. The present Director of the FBI was appointed in 1924 by Attorney General Harlan Fiske Stone, and has been reappointed by each succeeding Attorney General.

The jurisdiction of the Federal Bureau of Investigation extends generally to all federal crimes not specifically assigned to another agency of the Federal Government. Specifically it is charged with the duty of investigating violations of the laws of the United States, collecting evidence in cases in which the United States is or may be a party in interest, and performing other duties imposed upon it by law.

The headquarters of the FBI are located in the Department of Justice Building in Washington, D.C. In addition to its administrative offices it maintains in Washington its Identification Division, the FBI Laboratory, the National Academy, and its Uniform Crime Reporting facilities.

The Identification Division maintains the largest number of fingerprint records in the world. The number of fingerprints received in this division has increased from 87,918 in the fiscal year 1924 to 26,776,184 in the peak year of 1943. In the 1945

fiscal year 7,480,249 sets of fingerprints were received. An over-all picture of the growth of the Identification Division from 1924 to 1945 can be seen from the fact that in 1924 there were 810,188 prints in possession while in February, 1946, there were 100,000,000.

The FBI Laboratory was established in September 1932, as a scientific aid in crime detection. Here competent scientists are constantly working on evidence submitted by law enforcement agencies throughout the United States and in addition are conducting research to further aid law enforcement. Over one million examinations have been made by the laboratory. During the fiscal year of 1945, 136,098 examinations were conducted involving 194,445 specimens of evidence.

The FBI National Academy, founded in July, 1935, is concerned primarily with the training of police instructors and administrators. Applicants for attendance are carefully selected from local, county and state law enforcement agencies. The course of instruction consists of various phases of law enforcement with special emphasis placed on methods of teaching and organization of police schools within their own departments. Among the graduates of the Academy are representatives from every state in the Union, from some of the United States Territorial Possessions, and from several foreign countries. To date 1,125 selected officers have graduated from this school.

In its Uniform Crime Reporting project the FBI, at the request of the International Association of Chiefs of Police and pursuant to an Act of Congress, acts as a central clearinghouse for police statistics on a nation-wide basis. Monthly and annual crime reports forwarded to the FBI reflecting information as to the number of persons arrested, the number found guilty and related crime data, are summarized and published in the Uniform Crime Reports bulletin. The bulletin, which is published semi-annually, also contains information concerning the age, sex, race and previous criminal history of persons arrested throughout the United States as reflected by the fingerprint cards received in the Identification Division.

Wartime Duties. In September, 1939, the President designated the FBI as the clearinghouse for all matters concerning national security. This Presidential Directive placed the responsibility for handling matters pertaining to espionage, counter-espionage, sabotage, subversive activities, and violations of the neutrality laws under the jurisdiction of the FBI. In December, 1941, and July, 1942, by Presidential Proclamation the Bureau was made responsible for the apprehension of alien enemies in continental United States, Puerto Rico and the Virgin Islands.

Internal Security Matters. During the fiscal year 1945 the FBI, under the Alien Enemy Control program, apprehended 290 alien enemies—219 Germans, 68 Japanese, and 3 Italians. Closely connected with this program is the denaturalization of naturalized citizens of enemy countries who use their citizenship as a cloak for subversive activities. Based upon FBI investigations the citizenship of nine persons was cancelled during the 1945 fiscal year. Five hundred cases coming within the purview of the sedition statutes were investigated. During this same period, 3,093 convictions resulted from prosecutions under the Selective Training and Service Act, with sentences totaling 8,551 years, 9 months and 19 days. Fines imposed aggregated \$92,634.

As a result of investigations conducted by the FBI there were 2 convictions for misprision of

treason and 3 convictions under the general conspiracy statute for giving aid and comfort to German prisoners of war who had escaped from internment camps in the United States. Violations of the Espionage Statute resulted in 10 convictions with sentences totaling 89 years and 6 months and 2 life imprisonments and recoveries amounting to \$106,853 were realized.

During the 1945 fiscal year 3,081 reports of suspected sabotage were reviewed. Of the cases resulting in prosecution there were 45 convictions in Federal Courts. Sentences totaled 146 years, 2 months and 17 days. Fines of \$3,850 were levied. Investigation revealed that no person responsible for acts of sabotage was foreign-directed or motivated by a desire to obstruct the war effort. Culprits were prompted, generally, by personal reasons such as jealousy, anger or a desire for revenge.

General Criminal Investigations. Both during and since the cessation of hostilities in World War II, the FBI has continued to give close attention to its responsibilities in the general criminal field.

Eighteen kidnappings occurred during the fiscal year ending June 30, 1945. All of these were solved and there was no demand for ransom in any case. There were 34 convictions in Federal Courts resulting in sentences totaling 507 years, 2 months and 16 days. In addition, 22 fugitives sought for violation of the Federal Kidnaping Statute were located. Since the enactment of this law on June 22, 1932, to the close of the 1945 fiscal year, 279 kidnaping cases were investigated by the FBI and 277 of these were solved. The two remaining unsolved cases are still under active investigation.

Since 1932 a total of 577 convictions for kidnaping have resulted from prosecutions in Federal and State Courts with sentences of 6,475 years, 9 months and 9 days. In addition, there have been 44 life sentences and 12 death sentences, while 8 kidnapers have been killed resisting arrest, 7 have been murdered by other gang members, 2 have been lynched and one was declared insane.

During the 1945 fiscal year 7,892 stolen motor vehicles valued at \$6,402,439 were recovered in cases investigated by the FBI. This figure represents a decided increase over the 1944 fiscal year. Two thousand, four hundred and eighteen convictions resulted from prosecutions under this statute with sentences aggregating 7,384 years, 8 months and 7 days. In addition, fines of \$18,112 were reported and 840 fugitives were located.

A sharp increase was noted during the fiscal year in the number of violations of the several Federal statutes relating to theft, embezzlement and illegal possession of government property. Prosecutions resulted in 1,815 convictions with sentences of 2,836 years, 11 months and 25 days. Fines amounted to \$139,364, while recoveries totaled \$267,550.

For the fiscal year ending June 30, 1945, frauds against the Government showed a steady increase. From the cases investigated 344 convictions resulted with fines of \$228,624 being imposed. Recoveries and savings amounted to \$3,697,800 while sentences totaled 450 years, 7 months and 27 days.

Federal Bank Robbery Act. Since the enactment of the Federal Bank Robbery Act on May 18, 1934, a total of 1,051 bank robberies have been investigated. There have been 748 convictions in Federal Courts with sentences totaling 11,941 years, 3 months and 27 days, 2 death and 14 life. Six bank robbers have been killed resisting arrest, 3 committed suicide and 5 were adjudged insane.

During the fiscal year 1945 FBI investigations resulted in 53 convictions in Federal Courts for bank robbery, larceny and burglary. Total sentences

of 434 years, 3 months and 5 days were imposed and fines and recoveries amounted to \$58,004. Two bank robbers were killed resisting arrest.

Servicemen's Dependents Allowance Act of 1942. This Act makes possible the prosecution of women who fraudulently receive allowance checks from the government under the pretext of being legally married to a serviceman. In some instances women have married several soldiers, marines, sailors or members of the Coast Guard without legal dissolution of one or more previously contracted marriages.

There were 215 convictions resulting from investigations conducted during the 1945 fiscal year with sentences of 488 years, 3 months and 10 days. Fines in the amount of \$9,698 were imposed. FBI investigations also made it possible for the government to secure the repayment of \$34,177 by persons wrongfully receiving allowances.

In addition to the foregoing, such statutes as the White Slave Traffic Act, Impersonation Statute, Crimes on Indian and Government Reservations, National Stolen Property Act, Federal Extortion Statute and many other Federal criminal statutes are under the jurisdiction of the Federal Bureau of Investigation.

Over-All Statistics. During the fiscal year 1945 there were 13,813 convictions in cases investigated by the FBI with sentences totaling 31,962 years, 4 months and 6 days, 1 death sentence and 6 life sentences. Fines, savings and recoveries amounted to \$16,534,436, a total of 8,955 fugitives were located and 7,892 automobiles were recovered. The percentage of convictions of persons brought to trial was 96.9.

J. EDGAR HOOVER.

FEDERAL COMMUNICATIONS COMMISSION (FCC). During the calendar year 1945, the Federal Communications Commission laid the regulatory groundwork for the development of new types of radio broadcasting and for other important radio communication services.

The foundation of all subsequent expansion of radio communications was the Commission's reallocation of frequency bands in the radio spectrum. Wartime technological developments, particularly the invention of more powerful tubes, had extended the usable portion of the spectrum from 300,000 kilocycles to 30,000,000 kilocycles. This afforded an opportunity for the expansion of old services and the introduction of various new ones.

After lengthy public hearings and conferences, in which the Commission received extensive aid from the Radio Technical Planning Board, representing industry, the Commission ordered a reallocation of frequencies from 25,000 kc to 30,000,000 kc.

Frequency Modulation (FM) broadcasting, characterized by its ability to transmit the full range of tones and by its freedom from interference, had made a small start before the war. Because of its superior quality, the Commission was convinced that it would rapidly supplement standard broadcasting (AM or amplitude modulation) and perhaps eventually largely supplant it. For this reason, the Commission moved FM from 42-50 megacycles to 88-108 mc, where it could be assigned 100 channels each 200 kc wide, capable of accommodating more than 5,000 stations and where, in the opinion of the Commission, superior service would be possible. Twenty of these channels were reserved for noncommercial educational stations.

Regulations governing FM standards of good en-

engineering practice and a plan for the nation-wide allocation of channels were issued by the Commission toward the close of the year. The allocation plan provided channels for some 1,500 metropolitan and rural stations. In addition, it was estimated that channels could be allocated for some several thousand low-powered community stations.

At the close of the year, the Commission had issued conditional permits to 230 of nearly 800 persons or companies who had applied for FM channels. The existing FM stations were under orders to begin broadcasting on the higher band by Jan. 1 or as soon thereafter as possible.

Television's advance had been even more modest when wartime restrictions froze construction. Only six commercial stations and three experimental stations were operating. In allocating bands for the postwar future, the Commission was confronted with the problem of assigning space "downstairs" in the spectrum for immediate development of television along prewar lines in which there had been marked improvement, or moving it "upstairs" for the future development of black and white pictures of higher definition, and color pictures.

The Commission finally decided to allocate 13 channels below 300 megacycles for immediate commercial operation, and to allocate the 480-920 mc area for experimentation with a system of superior black and white pictures and color pictures. Television's eventual home in the spectrum is expected to be in the higher frequencies where there is space for the wider channels required for better television pictures and for the greater number of channels needed to establish a truly nationwide and competitive system. Active experimentation in this higher region was urged by the Commission.

At year's end, the Commission established television as a full-fledged commercial broadcasting service by issuing rules, standards of good engineering practice and an allocation pattern covering the first 140 metropolitan districts of the nation. In a number of districts there were more applications on hand than there were available channels. In these areas, the Commission was to hold hearings to determine which of the applicants were best qualified to operate the stations. All told, 150 applicants had filed for channels at the end of the year.

The 106-108 mc band in Area II (outside the northeastern section of the country) was reserved for commercial facsimile. The 470-480 mc band was reserved for experimental facsimile. In addition, facsimile experimentation is permitted on the regular FM channels.

A band was allotted for the Citizens Radio-communication Service—a personal type of radio service employing a low-power, short-range transceiver of the walkie-talkie or handie-talkie type. Bands were also provided for Rural Telephone Service, Industrial and Medical Service and Limited Private Telephone Service. Another new service, the proposed General Mobile Service for motor vehicles and other land, air and marine mobile units was provided for but before establishing it on a permanent basis, the Commission decided to issue a limited number of experimental licenses to determine the best operating plan. The new Railroad Radio Service was established, effective Dec. 31. The first experimental license for the civilian use of radar, for which several bands were set aside, was issued Dec. 13. Allocations above 25,000 kc also provided channels for many other previously established services. A proposed report on allocations below 25,000 kc had not been made final at

the end of the year. One of the proposals was to enlarge the standard broadcast band by adding the 540 channel. Amateur radio operators in good standing who had been silent since the beginning of the war were permitted to return to the air Nov. 15 on certain bands.

Broadcasting. A general public hearing to determine what changes, if any, should be made in the present policies on allocation of clear channels in the standard broadcast band was ordered by the Commission for Jan. 14, 1946. A report on a survey of the attitudes of rural listeners was released by the Commission, in connection with preparations for this hearing. In approving the sale of the Crosley radio properties to the Aviation Corporation of America, the Commission announced a plan whereby all interested parties would be given an opportunity to apply for licenses of stations offered for sale, that it would recommend that Congress consider adopting a yardstick to measure the appropriate value of a station, and that it consider further defining the qualifications of licensees—particularly to determine as to what extent large companies should be permitted to control radio stations. At the end of the year, 939 standard broadcast stations were operating, 65 additional ones were under construction and 520 applications for new stations were pending.

Common Carrier. Reductions in interstate telephone rates made during the year following negotiations between the Commission and the American Telephone and Telegraph Company will save users \$41,000,000 annually. Substantial savings also were assured when the Commission authorized a 20-cent word basic rate on full-rate messages to Europe, Central America, West Indies, South America and the Philippines from U. S. gateway cities and a uniform full rate of four cents a word for transmitting international full rate messages overland to or from any point in the United States beyond the gateway city.

Sharply reduced rates between the United States and British points were agreed to at the Bermuda Telecommunications Conference of United States and British Commonwealth delegates held in the fall of 1945. These reductions are to go into effect by April 1, 1946. An agreement was also reached at this Conference for the establishment on a permanent basis of certain direct radio circuits to British points. The Bermuda Conference was a highly significant contribution toward the movement for a fuller and freer flow of communications and to international understanding and cooperation.

Other Activities. The Foreign Broadcast Intelligence Service of the Commission was transferred on Dec. 31 to the War Department. This Service was established in 1941 to provide the various interested agencies of the Government with rapid reports on foreign radio broadcasts. Its reports, some transmitted by direct wire and others in mimeograph form, were based on a careful examination of several millions of words heard daily. At the time of transfer to the War Department, the FBIS maintained listening posts in Washington, D.C.; Portland, Oregon; Hawaii and Guam and also exchanged reports with the British Broadcasting Corporation.

The Commission's Radio Intelligence Division (RID), notable for its wartime service of patrolling the ether for espionage radio transmissions has continued to maintain a round-the-clock surveillance to guard against any misuse of the airways, to locate illegal operators, to track down sources of interference to legitimate radio communications

and to furnish directions to airplanes that had lost their way.

PAUL A. PORTER.

FEDERAL COUNCIL OF THE CHURCHES OF CHRIST IN AMERICA. An organization established in 1908 by 28 Protestant denominations to act for them in matters of common interest. At the end of 1945 it included most of the major Protestant denominations of the United States and also three branches of the Eastern Orthodox family. The total number of members included in the Council's constituency in 1945 was 28,000,000.

The Council continued its ministry to men and women in the armed forces and to those returning to civilian life, but it gave special attention to problems of world order. In January it held a national conference of church leaders to consider ways of strengthening the movement for world order. Amendments were suggested to the Dumbarton Oaks proposals and educational work was planned in preparation for the San Francisco Conference. The Council sent consultants to San Francisco and, along with other religious groups, was influential in securing the inclusion in the Charter adopted for the United Nations Organization of provisions regarding human rights and fundamental freedoms.

During the year plans were formulated for a comprehensive relief and reconstruction program through the churches in Europe and Asia. Dr. Samuel McCrea Cavert, the General Secretary of the Council, was loaned to the World Council of Churches for six months, to work at its headquarters in Geneva in helping to develop its program, especially in the field of reconstruction and relief in Europe.

The resumption of fellowship with the churches of Germany and Japan was promoted by the sending of deputations to both these countries.

A statement was issued on the control of the atomic bomb and upon the need of moral and spiritual disciplines in the new atomic age. In line with this statement, the Council's program of visitation evangelism was strengthened and also its radio ministry.

In the field of race relations, the Council held interracial clinics in some sixteen cities, bringing the various groups in the community together under church auspices to study the causes of tensions and to formulate plans for improving conditions.

The Council continued to hold interdenominational conferences on family life, on religion and health, on Christian social work and on public worship.

The *Information Service* was published weekly as an analysis of social, international and interracial problems of special interest to the churches. The *Federal Council Bulletin* (monthly) is the official organ of the Council. Other publications are: *Interracial News Letter* (bi-monthly), *Town and Country Church* and *Post-War World*.

Officers in 1945 were: President: Bishop G. Bromley Oxnam; Vice President: Dr. Benjamin E. Mays; Treasurer: Harper Sibley; General Secretary: Rev. Samuel McCrea Cavert. National offices are at 297 Fourth Avenue, New York 10, N. Y. An office is maintained in the Woodward Building, Washington 5, D.C.

FEDERAL DEPOSIT INSURANCE CORPORATION (FDIC). An independent agency of the U.S. Government, organized under the Banking Act of 1933 to insure the deposits of all banks which are entitled to the benefits of insurance under the law. The major

functions of the Corporation are to pay off the depositors of insured banks closed without adequate provision having been made to pay claims of their depositors, to act as receiver for all suspended national banks and for suspended State banks when appointed by State authorities, and to prevent the continuance or development of unsafe and unsound banking practices. The Corporation may also make loans to or purchase assets from the insured banks when such loans or purchases will facilitate a merger or consolidation and will reduce the probable loss to the Corporation.

The capital stock of the Corporation is as follows: (1) by the Treasury of the United States, \$150,000,000; (2) by the Federal Reserve Banks, \$139,299,556.99. On June 30, 1945, the surplus of the Corporation amounted to \$579,200,000 and total capital account to \$703,055,000. Of the 14,206 operating commercial banks and trust companies in the United States and possessions, deposits in 13,282 banks were insured by the Federal Deposit Insurance Corporation. Of the 545 mutual savings banks, 192 were insured by the Corporation.

Federal credit unions, cooperative associations organized in accordance with the Federal Credit Union Act, were transferred to the Federal Deposit Insurance Corporation Apr. 27, 1942. On June 30, 1945, there were 3,800 Federal credit unions in operation. Share balances in credit unions are not insured by the Corporation.

Chairman in 1945: Leo T. Crowley.

FEDERAL POWER COMMISSION (FPC). An independent agency of the U.S. Government, first established in 1920, which has jurisdiction over water power projects on navigable streams or affecting interstate or foreign commerce, or upon public lands, and over the interstate movement of electric energy. It also regulates the transportation or sale of natural gas in interstate commerce under the Natural Gas Act. The Commission exercises emergency powers in wartime, including that of interconnecting and coordinating power facilities where essential to the war effort. Chairman in 1945: Leland Olds, Acting.

FEDERAL RESERVE SYSTEM. An agency of the U.S. Government established in 1913 for more effective supervision of banking in the United States and for other purposes. The System comprises the Board of Governors; the Federal Open Market Committee; the 12 Federal Reserve Banks and their branches situated in different sections of the United States; the Federal Advisory Council; and the member banks, which include all national banks in the United States and such State banks and trust companies as have voluntarily applied to the Board of Governors for membership and have been admitted to the System. Chairman in 1945: Marriner S. Eccles.

FEDERAL SECURITY AGENCY (FSA). An agency of the U.S. Government which was established July 1, 1939, as a result of the Reorganization Act passed by the Congress earlier in that year, to promote "social and economic security, educational opportunity, and the health of the citizens of the nation." It brings together Government agencies having related responsibilities in these broad fields. As the Agency is presently constituted, its component units are the Public Health Service, under which is Freedmen's Hospital; the Office of Education; the Social Security Board; the Food and Drug Administration; the Office of Vocational Rehabilitation; and Saint Elizabeth's Hospital. It also represents Federal participation in the work

of Howard University, the Columbia Institution for the Deaf, and the American Printing House for the Blind. (See separate articles on the first five of the component agencies.) The affairs of the Federal Security Agency are under the direction and supervision of the Federal Security Administrator. He is assisted by the Assistant Administrator, who acts as Administrator in his absence, and by a staff of administrative, special, and technical assistants who aid in the activities and correlation of the different units of the Agency. Within the Office of the Federal Security Administrator and functioning as integral parts of that office are the Office of Community War Services and the Office of War Property Distribution.

Office of Community War Services. This office was established to promote cooperative effort between the Federal Government and local communities in the provision of essential services to citizens of war-burdened towns and cities—health, medical care, welfare, education, recreation, social protection, and related areas of community well-being. The fiscal year 1944-45 threw into new perspective the operations of this office.

During the early part of the year the production effort to achieve victory was greatly intensified. Strains upon the physical resources of communities increased and strains upon workers and civilians were intensified. Family dislocations continued and multiplied. At the close of the year units of servicemen were returning for demobilization or redeployment; the wounded were being brought back in large numbers. Some training camps were closed, others which had been closed were reactivated. Industries and munition plants producing for war needs reduced their output. Boomtowns like Willow Run became ghost towns, their vast plants closed. The greatest migration in our history started in reverse. All this caused new community tensions; racial conflicts flared; the problems of youth became more acute. Venereal disease and prostitution, which had been held in check by war restrictions, spread a widening threat over the nation.

Before the close of the fiscal period V-E day had come and V-J day loomed on the horizon. Within this complex of change and readjustment the Office of Community War Services, as the war arm of the FSA, carried on its appointed task of helping war areas to meet the problems imposed upon them. Organization already effected to do the job was strengthened and geared to the rapidly changing situation. A few new facilities were established but the main goal was to help communities hold the gains already made, while they adjusted to the unending processes of production, and the problems of deployment.

The major functions of the Office are to serve as a custodian of certain properties and programs and as interpreter and liaison agent between Federal agencies charged with certain war responsibilities and local communities in which these responsibilities must be carried out. In that capacity it has maintained continuously up-to-date information on localities where the war has caused serious dislocation; analyzed and made known the facts; and helped mobilize the proper resources to meet the situation. This in some instances means helping communities to discover their own resources, helping them to get effective local community organization of interested agencies, lending the specialized services of the Office of Community War Services staff, interpreting acute local problems to interested Federal agencies concerned with such problems as housing, transportation, health, welfare, recreation, social protection, juvenile delinquency, food and

eating facilities, fuel and ice, commercial services (stores, laundries, banks, personal services).

The work in communities is based on complete reports and surveys—more than 649 basic reports of 364 war areas having been made. During its history representatives of the Office have worked in 2,500 communities. In the three last months of the fiscal year intensive work was carried on in an average of more than 300 communities and the number varied during the year from 200 to 300 a month.

No expansion of activities could be planned as the fiscal year drew to a close. Rather, since the Office was specifically set up as a war agency, curtailment in personnel, expenditures, and program had to be anticipated. On the other hand, communities were already beginning to look beyond the dislocations of war with an idea of gearing the experience and progress they had made into greatly expanded postwar plans. The Office was called upon to help them in this transition.

Recreation Division. The Recreation Division, acting within the framework of the general responsibilities of the Office of Community War Services, is concerned with helping communities to maintain the health and morale of servicemen, war workers and their families, and young people through recreational activities. In the beginning of the program the services of the Recreation Division were centered mainly in military areas, but later the problems of war workers and their families in war-burdened communities became of increasing concern. The demands of youth pressed for attention in the face of growing delinquency and the inadequacy of services in communities to keep adolescent boys and girls from becoming war casualties.

More than 2,500 communities have been helped to carry their load through services and facilities provided by the Recreation Division. It has the responsibility of supervision of 1,700 USO centers and 1,200 independent servicemen's centers. Much of the work in these centers is carried on by volunteers who must be trained and checked constantly. The Recreation Representatives have a responsibility for the character of these services. USO and local centers were reduced by only 15 to 20 per cent during the year. A growing responsibility arose in connection with 106 Army and Navy general hospitals and 23 convalescent areas. Recreation interests for ambulatory patients, information centers, housing and eating facilities for the families and friends of the patients created demands upon the Recreation staff.

As agents of the Federal Works Administration the Office is responsible for the protection and proper use of 454 Federal recreation buildings, representing a cost of more than \$30,000,000, some in the vicinity of military camps, others in housing projects and war production communities. As populations shift and use of some of these buildings falls off, a new responsibility to aid in their disposal so that they serve the best need of communities is an important one facing the Division.

The Recreation Representatives have helped industrial plants to provide recreation programs for their employees. Approximately 6,000 plants now have such programs.

The Division has had a growing responsibility to help communities provide constructive recreational interests for youth and has played an important part in fostering the more than 3,000 youth centers which have been established over the country. The Recreation Representatives conducted a questionnaire survey of more than 300 of these teen-age

clubs, the results of which are published in a pamphlet.

The Division has helped communities to establish permanent tax-supported recreation programs. Approximately 250 towns and cities have established recreation departments since the war.

A major responsibility of the Division has been the encouragement to States to create State Recreation Committees and Departments to aid communities in developing their programs. Twenty-three State committees have been organized and four States now have permanent Recreation Departments established by legislation.

As war problems have revealed the need for continuing recreation plans in communities, the Recreation Representatives have been called upon to advise and help develop long-range plans. In many instances these plans involve war memorials in the nature of parks and playgrounds, community recreation centers, beach areas and swimming pools. In general, members of the Recreation staff have helped communities to foresee and adjust to the transition from war to peace in respect to their recreation programs.

Social Protection Division. During the fiscal year 1944-1945, rapid adjustment to meet the changing war situation and approaching peace keynoted the program of the Social Protection Division, which was established to help communities carry out the Federal Government's policy of preventing and repressing prostitution and controlling the venereal diseases.

During the war years, commercial prostitution was effectively repressed and the spread of venereal disease was controlled, in the vicinity of military concentrations, through cooperative effort on the part of the Army, Navy, U.S. Public Health Service, and the Social Protection Division. V-E day and the approaching end of the war brought a serious threat of the re-opening of houses of prostitution and general relaxation of repressive measures in many communities. Upon request of mayors and chiefs of police, Social Protection Representatives spent an increasing amount of time revisiting communities to forestall such contingencies.

At the end of the fiscal year, venereal disease rates in the Army and Navy were more than double the 1942 figure. It was estimated that 40 per cent of the infections occurred while servicemen were on furlough, making it evident that a serious problem lay outside of military areas. The furlough problem made it necessary to shift the attack from service cities to communities over the country. A broader attack upon the program, consequently, was essential. State-wide boards composed of concerned officials and citizens were organized shortly after V-E day by the field staff. To implement the program on the local level, emphasis was placed upon over-all community organization aimed at combating the combined evils of prostitution, promiscuity, and venereal disease. Local Social Protection Committees were organized and existing committees strengthened.

Sustained community programs, including participation by officials in the fields of law enforcement, health, welfare, and education, as well as supporting citizen groups, had been developed in 215 communities by the end of the fiscal year. In 500 additional communities, houses of prostitution had been closed, making a total of 715 communities where social protection programs had been established.

The Social Protection Division continued to work in close cooperation with the Army, Navy, U.S. Public Health Service, in Washington as well as

with their District or Regional offices. The Division cooperated with other Federal agencies having a concern in the program, such as the Children's Bureau of the United States Department of Labor, the FBI and Bureau of Prisons of the U.S. Department of Justice, the Bureau of Public Assistance of the Social Security Board, and the Office of Education of the FSA. The Division maintained close relationship with the American Social Hygiene Association and its affiliated societies.

The Division continued to enlist the cooperation of national, regional, State, and local organizations representing such business interests as the American Hotel Association, Conference of Alcoholic Beverage Industries, Allied Liquor Industries, Distilled Spirits Institute, U.S. Brewers' Foundation, American Motor Hotel Association, Inc., and affiliated State and local tavern organizations, the National Association of Taxicab Owners and the American Taxicab Association, as well as labor organizations of waiters and bartenders. These organizations put into practice self-policing policies which had been developed jointly with them by Social Protection Representatives. *She Looked Clean—But*, a pamphlet designed especially for this type of organization, was published as a means of convincing these groups of the need for and value of social protection.

Acceptance and public support of the social protection program by the general public continued to be developed through the various national lay organizations representing veterans' groups, women's clubs, labor unions, racial groups, chambers of commerce, and community chests and councils.

The Social Protection Division continued to call on its several national committees for assistance in developing a nation-wide program. These included the National Advisory Police Committee; the National Sheriffs' Association; the Committee on Courts and Wartime Social Protection of the American Bar Association; the National Venereal Disease Committee, composed of physicians, educators, and the clergy; and the National Women's Advisory Committee on Social Protection, whose members represent the outstanding women's clubs and service groups.

Extending its activities into the field of social treatment, the Division cooperated with public welfare departments and private family agencies in several experimental projects designed to develop better methods of social treatment of promiscuous women and girls. Agencies throughout the country were encouraged to adopt the methods thus learned.

Office of War Property Distribution. This office was established to carry out the Federal Security Agency's responsibility in the disposal of surplus war properties. Divisions of Surplus Property Utilization were established in the two constituent units of the agency concerned—the Public Health Service and the Office of Education.

The Federal Security Agency's part in the disposal and distribution of surplus property is to act as liaison between the Federal disposal agencies and the States, communities, and non-profit organizations which are in line to apply for the available property on a basis of need. The institutions eligible include publicly supported and non-profit schools, hospitals, clinics, libraries and similar institutions. Provision is also made for other types of non-profit institutions. On applications approved by the FSA such institutions may purchase property from disposal agencies at the "fair value," which in practice will be the lowest price for which the property is sold at any commercial level.

The Division of Surplus Property Utilization set up in the Public Health Service works with State and local health officers to help them determine community needs and to make application for war property, and the similar Division in the Office of Education performs the same services for school officials.

WATSON B. MILLER.

FEDERAL TRADE COMMISSION (FTC). An independent agency of the U.S. Government, established in 1914, which has the following threefold purpose: To promote free and fair competition in interstate trade in the interest of the public through prevention of price-fixing agreements, boycotts, combinations in restraint of trade, unlawful price discriminations, and other unfair methods of competition and unfair and deceptive acts and practices; to safeguard life and health of the consuming public by preventing the dissemination of false and fraudulent advertisements of food, drugs, cosmetics, and devices which may be injurious to health; and to make available to the President, the Congress, and the public factual data concerning economic and business conditions as a basis for remedial legislation where needed, and for the guidance and protection of the public interest.

Since the outbreak of war the staff was concerned also with special war work. It made thousands of reports, furnished numerous industrial studies, carried on priorities and related investigations in key and basic industries, examined and checked periodical, radio, and other advertising. Chairman in 1945: Edwin L. Davis.

FEDERAL WORKS AGENCY (FWA). An Agency of the U.S. Government comprising the five agencies which are concerned with the provision and financing of public works and services, namely, Public Works Administration, Public Buildings Administration, Public Roads Administration (qq.v.), Federal Fire Council, and Federal Real Estate Board. The functions of the Public Works Administration and the Work Projects Administration are now in process of liquidation in the Office of the Federal Works Administrator. Administrator in 1945: Maj. Gen. Philip B. Fleming.

FENCING. Two former champions regained titles in the national tournament that highlighted fencing last season. Lieut. Norman C. Armitage, U.S.N.R., who represents the New York Fencers Club, defeated Dr. Tibor Nyilas of Salle Santelli, his conqueror in 1944, and annexed saber honors for the tenth time while Dornell Every of the New York A.C., king in 1938 and 1940, wrested the foils title from Alfred Snyder, one-armed swordsman of the Fencers Club. Mack Gilman of Illinois gained U.S. épée honors and Miss Maria Cerra of the Fencers Club took the women's individual crown.

Brooklyn College dethroned Hunter as women's intercollegiate team champion, with Miss Julia Kassell, captain of the winning group, carrying off individual laurels.

THOMAS V. HANEY.

FERRO-ALLOYS. Dependence of the United States upon imports for many of the ferro-alloys used in making quality steels was further emphasized by the war. Although strenuous attempts were made to develop domestic mines, particularly for chrome and manganese, opening of the sea lanes was a signal for return to foreign sources.

Chrome. Scores of small mines which had sprung up in the Pacific Coast states early in the war

virtually ceased production in 1945, and national ore production was only 11,000 short tons. Most of the domestic ore had proved to be of lower grade than needed by the steel industry, and blending with high grade imported ores was necessary. Ore imports were 806,000 short tons, with shipments from Rhodesia, Russia, Transvaal, and Turkey. Resumption of shipments was expected from the Philippine Islands, which in prewar years supplied as much as one-quarter of United States requirements. As of Oct. 31, the Reconstruction Finance Corporation had accumulated a stockpile of refractory grade chromite of 236,855 gross tons for the government.

During the war chrome alloys were of vital importance. Stainless steel, which has a chrome content of about 18 per cent, had many uses in the aviation and transportation industries, and special alloys to withstand high temperatures were essential to the development of jet propulsion aircraft and rockets. Chrome chemicals proved to be critical, and plans were being laid to provide additional production facilities when the war ended. Chrome chemicals are used in the production of pigments for camouflage; priming pigments for aircraft, naval and maritime vessels; tanning of leather; textile processing; plating and anodizing; the manufacture of pure metallic chromium for special alloys; and other war uses. Their use in civilian paints will again assume importance during peacetime.

Manganese. Of the scores of American mines and gopher holes scratching for high grade manganese in the early part of the war, only Anaconda Copper Company and Domestic Manganese & Development Company in Montana and Dominion Manganese Corporation in Virginia were producing a substantial tonnage at the end of 1945. Montana accounted for more than three quarters of domestic production. Even the Sunshine Mine on the Olympic Peninsula in Washington, which became a substantial wartime producer, closed down in mid-year. Some production also came from Arizona, Arkansas, California, Nevada, and New Mexico. Together, the domestic mines produced 193,000 short tons of ore (35 per cent or more manganese content) in 1945 compared to a revised production figure of 247,616 short tons in 1944, according to the U.S. Bureau of Mines. Imports totalled 1,500,000 short tons of ore of that grade (1,157,561 short tons in 1944; 1,429,599 short tons in 1943). Union of South Africa, Gold Coast, Cuba, and Brazil were principal suppliers with lesser amounts from Chile, India, Russia and Mexico.

More than 90 per cent of manganese consumed in the United States, either as an ore or as an alloy, found its way to the steel industry, where its properties as a deoxidizer make it valuable in all steel production, and where it is also used to impart the quality of hardness to steel. Small amounts were used in the manufacture of dry cells, chemicals, and miscellaneous products. Ferro-manganese, spiegel-eisen, and silico-manganese are the principal alloy forms in which the element is introduced in steel making. The dry battery industry employs a particularly pure grade of manganese dioxide. Reconstruction Finance Corp., stockpiling for the government, had stocks of 939,543 gross tons of metallurgical grade manganese as of Oct. 31, 1945.

Molybdenum. Of the important ferro-alloys, molybdenum is one of two in which the United States normally is the world's principal producer. Mine production dropped to 36,500,000 lb. contained in concentrates in 1945 from a revised total of 38,679,500 lb. in 1944; 61,667,000 lb. in 1943; and 56,942,000 lb. in 1942. The sharp drop in the

past two years, although partly due to shortage of manpower, was not serious from the standpoint of requirements, for heavy exports to America's allies necessary early in the war and substitution for tungsten in making alloy steel no longer were necessary. The 1944 and 1945 production reflects, rather, a high level of domestic demand for normal usage. The Colorado mine of Climax Molybdenum Company, high in the Rocky Mountains, produces the majority of domestic ore, with other substantial amounts coming as a by-product of the porphyry copper mines. The Pine Creek mine of U.S. Vanadium Corporation in southeastern California produced a considerable tonnage along with tungsten until its operations were restricted in the fall of 1945. Commercial reserves of molybdenum ore in the United States are estimated to be sufficient to last for 422 years at the 1935-39 rate of use. The government, through the Reconstruction Finance Corporation, held a stockpile of 4,746,202 lb. of molybdenum contained in concentrates as of Oct. 31.

Introduced into steel, molybdenum imparts toughness, structural stability, elevated temperature strength, depth hardening, and reduces susceptibility to temper brittleness. Usually used in conjunction with such other alloys as chrome, nickel, or manganese, molybdenum is alloyed in steels used in stressed machinery parts, dies, high speed cutting tools, corrosion resistant alloys, and steels for use at elevated temperatures.

Tungsten. By the end of 1945, the United States had progressed so far towards meeting current tungsten requirements that it was able progressively to curtail its import contracts, principally with Bolivia. This contrasts with the situation as recently as 1936, when China and Burma produced about 70 per cent of the world supply, and very little was mined domestically. Domestic production declined in 1945 to 5,807 short tons (in terms of 60 per cent tungsten trioxide concentrates) from a 1944 production of 10,259 short tons. The curtailment reflected principally a drop in domestic and export demand which had commenced the previous year, and which promised to fall further with the end of war needs.

Expiration of government purchase contracts and lower prices shook down mining activities to three principal producers. By far the largest was the Yellow Pine mine of Bradley Mining Company in central Idaho, where a bonanza discovery just before the war was responsible for relieving a critical shortage. The Nevada-Massachusetts Co. in central Nevada was a large producer. The Pine Creek mine of U. S. Vanadium Corporation (see MOLYBDENUM), at Bishop, Calif., halted mining operations in the fall for further development work, but continued to treat tailings. Concentrates produced by several properties were treated at a government-owned plant at Salt Lake City.

Despite the fine wartime records of domestic mines, known reserves of tungsten ore in the United States are limited. An estimate by Elmer W. Pehrson of the U. S. Bureau of Mines indicated commercial ore reserves would be sufficient to last only four years at the average 1935-39 rate of use. About 8,500 tons (in terms of 60 per cent tungsten trioxide concentrates) were imported in 1945. Bolivia, followed by Brazil, furnished the majority of the tonnage, with Argentina, Peru, Mexico, and New Zealand supplying lesser amounts. In 1946, it was generally expected that China would resume her place as a leading supplier, with production also being resumed in Burma. Rich deposits, with some of the ore being picked from stream beds,

coupled with low-cost labor, indicated the revival of Chinese production.

Much of the domestic and most of the foreign ore was sold to the American Government which had accumulated a stockpile of concentrates, as of Nov. 30, having a tungsten content of 25,785,200 lb. Legislation was pending at the end of the year to create a permanent stockpile for use in future national emergencies. In addition stocks of close to 5,500,000 lb. in terms of tungsten content were held by industry.

Consumption, which dropped about 50 per cent following the peace with Japan, totalled about 14,800 short tons (in terms of 60 per cent tungsten trioxide concentrates). Military requirements for armor piercing shot went up early in the year in connection with the increased ammunition program following the Belgian break-through. Use of the metal in high speed tool steels was restricted April 7, 1945, after having been freed in August, 1944. With the end of the European war, restrictions again were lifted, effective July 4, and on July 24 allocation control was removed from all tungsten products except wire. In peacetime, the major use of tungsten is in alloy tool and die steels and tungsten carbide tools for the metal working industry, and for lamp filaments. Some also is used for gasoline motor valves, permanent magnets, chisels, and punches. The high-speed tool steel most widely used in the United States contains 18 per cent tungsten, 4 per cent chromium, and 1 per cent vanadium.

Vanadium. Domestic vanadium mine production in 1945 dropped rapidly following the end of the war with a total output of 2,950,000 lb. of contained vanadium in ores and concentrates. Increased emphasis was placed on vanadium production during the war, it was revealed, because of the occurrence of uranium in the vanadium ores of western Colorado, eastern Utah, and northeastern Arizona. From 2 to 4 per cent U_3O_8 (uranium oxide) is contained in these ores and its recovery was emphasized to supplement foreign uranium ores for use in the atomic bomb project.

Domestic vanadium ores were supplemented for normal uses by imports of 1,552,309 lb contained in ores and concentrates, principally from Peru. On Oct. 31, the United States Government, through the Reconstruction Finance Corporation, maintained a stockpile of ores and concentrates containing 1,805,568 lb. of vanadium. Legislation was under consideration to retain this and other metals in a permanent stockpile to be held against future emergencies. Unmined commercial vanadium ore reserves of the United States were estimated by the U.S. Bureau of Mines to be sufficient for only 7 years' consumption at the average 1935-39 rate of use, although future development may uncover additional deposits.

Consumption was slightly higher than in 1944, when 5,355,241 lb. were used. It also slightly exceeded the total of domestic production plus imports, the balance coming from stockpile. Like tungsten, vanadium is an important alloying element in the production of high-speed steel used for cutting metals. Vanadium steels also are used in forging and casting highly stressed mechanical parts, having particular importance in the automotive industry. Improved supplies of vanadium permitted the removal of restrictions on its distribution by the War Production Board June 6.

CHARLES T. POST.

FILIPINO REHABILITATION COMMISSION. A Commission created by Act of Congress, approved June

29, 1944, to investigate and formulate recommendations on all matters affecting postwar economy, trade, finance, economic stability, and rehabilitation of the Philippine Islands, including the matter of damages to public and private property and to persons occasioned by enemy attack and occupation. U.S. Chairman, Millard E. Tydings.

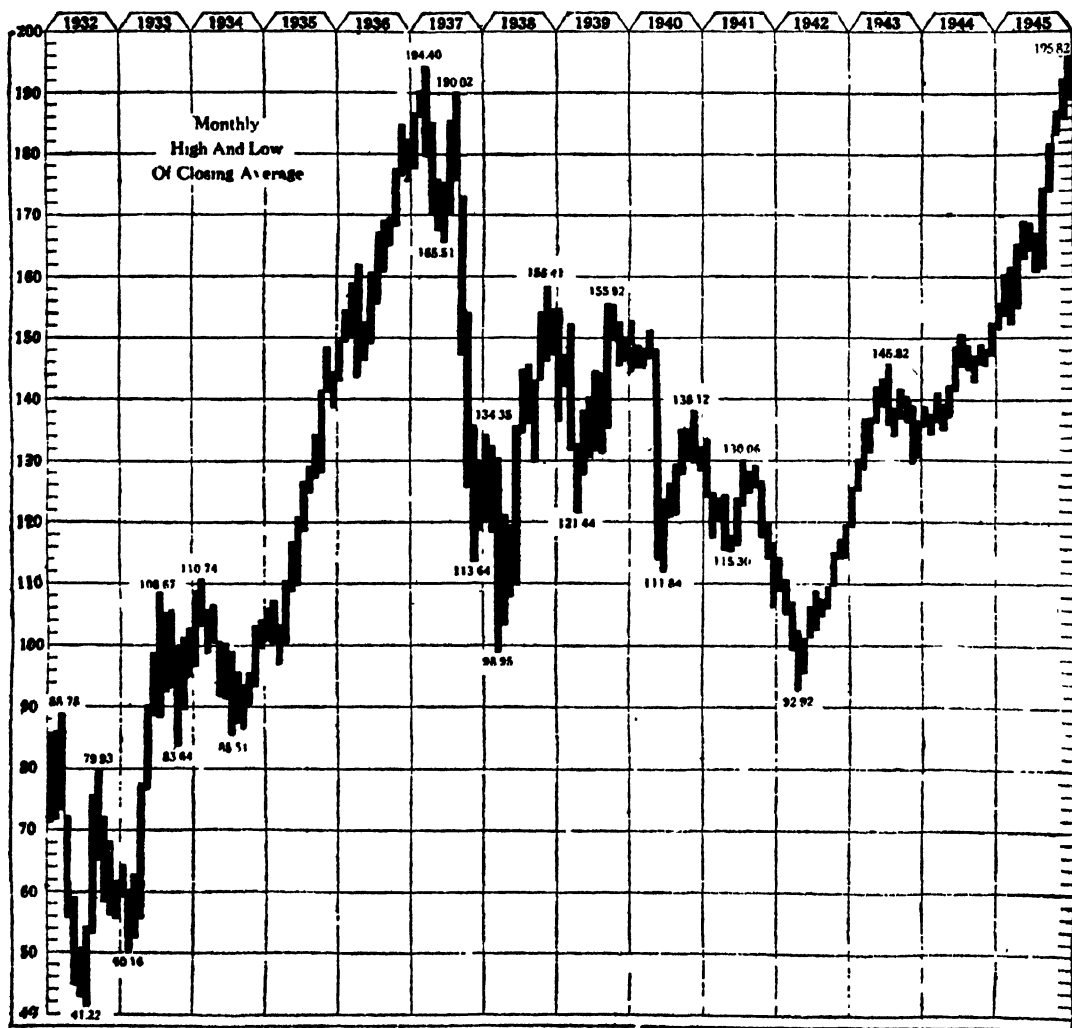
FINANCIAL REVIEW. The dominant financial development of the war period, a rapid inflation of the nation's money supply resulting from the purchase of huge amounts of Government securities by the banks, showed little sign of abatement. Although the war came to an end, the supply of Treasury obligations expanded. The Victory Loan drive in December, like the earlier war loan drives, stimulated considerable purchases of Government securities by the banks, creating billions of additional deposits.

Since goods and services were not available in sufficient volume, an abnormally large part of the

national income of the year was perforce saved. Net savings of individuals in 1945 were estimated at \$35,000,000,000, as compared with \$39,900,000,000 in 1944. These huge savings, chiefly in the form of cash, played a major part in the rise in stock and real estate prices during the year, and greatly complicated the task of the Office of Price Administration in its effort to stabilize the commodity price structure.

The Stock Market. Stock prices advanced throughout 1945, the only sizable reaction occurring in midsummer when the Japanese collapse appeared imminent. The German surrender, it was recognized, would not produce drastic economic changes because of the determination of the armed forces to continue all-out warfare in the Far East to precipitate an early Japanese collapse. But when one military setback after another brought nearer the surrender of Japan, it was feared that a drastic decline in industrial production lasting several months would cut corporate earnings sharply. The

Dow-Jones Industrial Average



INDUSTRIAL AVERAGE, 1932-45

sporadic liquidation produced by this fear proved short-lived, however. A vigorous advance in stock prices got under way in August which carried the averages above the 1937 peak and up to the highest point reached in 15 years. The advance was accompanied by a moderate expansion of turnover, but the 75 percent margin requirement prevailing prevented any material increase in security loans such as accompanied strong markets in the past.

The advance in share prices was broad and inclusive. Stocks of companies in industries that would benefit greatly with the end of the war, such as retailing, automobile manufacture, railroad equipment manufacture and building, were prominent in the rise. But sharpest gains were registered in low-priced stocks in many fields, particularly some of the junior public utility holding company issues where recapitalization plans were modified to recognize higher portfolio values, to the advantage chiefly of the junior equities. The repeal of the excess profits tax was a powerful influence during the final months of the year, with sharp advances in liquor, public utility operating company and other groups likely to enjoy a sharp rise in earnings in 1946 because these corporations had been paying large excess profits taxes.

Major influences behind the year's bull market were:

1. Confidence that a protracted period of record production of civilian goods would follow reconversion, because of severe shortages produced by the war and ample purchasing power possessed by the population.

2. Repeal of the excess profits tax and expected further reductions in other taxation, which would increase corporate net income.

3. Constant increase in the volume of liquid funds available for investment, and the declining level of interest rates which makes investors content with lower stock, as well as bond, yields.

4. Growing pressure upon commodity price ceilings, indicating that the price level might rise sharply following the lifting of controls. Rising commodity prices, by expanding profits of business, usually benefit stockholders.

5. Significant changes in Administration personnel and domestic policies following the death of President Roosevelt, indicating a swing to the right. This last factor played a considerable part in the increased popularity of utility securities.

Not only expected reconversion difficulties, but especially the serious labor troubles that developed in the final months of the year, were largely ignored by the security markets. To an extent seldom encountered in the past, investors were concerned with the longer-term outlook, and ignored near-term developments. Although the bull market which began in the spring of 1942 had lasted almost four years without significant interruption, buying orders continued to pour into brokerage houses until the close of 1945.

The turnover on the New York Stock Exchange aggregated 377,563,575 shares during 1945, as compared with 263,074,018 shares in 1944. This was the highest turnover on the Exchange since 1937. The largest daily turnover of the year was 2,938,050 shares on June 28. Showing the great change in the character of the market produced by margin regulations and other controls, this maximum turnover for the year compared with the record for all time of 16,410,030 shares reached on Oct. 29, 1929. The *New York Times* index of 25 industrial stocks showed a rise of 24 per cent for the year, and the index of 25 railroad stocks gained 34 percent.

Dividend payments were moderately larger, as

the end of the war reduced pressure to build up cash balances of corporations and led to a number of extra dividends, stock dividends and split-ups. Cash dividends for major groups of corporations in 1945 compared with 1944 as follows:

TABLE 1—DIVIDEND PAYMENTS
(In millions of dollars)

	1944	1945
Manufacturing.....	1,913	1,915
Railroads	201	218
Mining	163	173
Trade	207	226
Communications.....	240	244
Heat, light & power.....	424	427
Other.....	539	592
Total	3,687	3,795

The high, low, and closing prices of leading issues listed on the New York Stock Exchange are shown in Table 2.

TABLE 2—PRICES OF ACTIVE STOCKS, 1945

Stock	High	Low	Close	Net Change
Allegheny Corp.	6 1/2	2 1/2	5 1/2	+2 1/2
Am. Cable & Rad.	17	10 1/2	15 1/2	+4
Am. Power & Lt.	13 1/2	2 1/2	11 1/2	+8 1/2
Am. Rad. & St. S.	19 1/2	11 1/2	18 1/2	+15 1/2
Am. Roll. Mill	30 1/2	15 1/2	28 1/2	+13 1/2
Am. Tel. & Tel.	196 1/2	157 1/2	191 1/2	+27 1/2
Am. Wat. Wks.	28 1/2	8 1/2	25 1/2	+16 1/2
Anaconda Copper	49	29 1/2	44 1/2	+15 1/2
Armour & Co.	15	6 1/2	13 1/2	+6 1/2
Bald Loco.	35 1/2	24 1/2	34 1/2	+8 1/2
Balt. & Ohio	28 1/2	11 1/2	25 1/2	+13 1/2
Boeing Airplane	34 1/2	17 1/2	31 1/2	+13 1/2
Budd Mfg.	25 1/2	10 1/2	23 1/2	+13 1/2
Carrier Corp.	33 1/2	21 1/2	29 1/2	+7 1/2
Certain-teed Prod.	16 1/2	7 1/2	15 1/2	+7 1/2
Ches. & Ohio	58 1/2	57 1/2	55 1/2	+5 1/2
Colum. Gas & El.	11 1/2	4 1/2	10 1/2	+5 1/2
Com. with & South	4 1/2	1 1/2	3 1/2	+2 1/2
Cons. Edison	34 1/2	24 1/2	33 1/2	+8 1/2
Cons. Vultee	35 1/2	17 1/2	33 1/2	+14 1/2
Cont. Motors	20 1/2	8 1/2	18 1/2	+9 1/2
Curtis Publishing	24 1/2	9 1/2	21 1/2	+12 1/2
Curtiss-Wright	9 1/2	5 1/2	7 1/2	+2 1/2
Del. Lack. & West.	16 1/2	7 1/2	13 1/2	+4 1/2
El. Power & Lt.	19 1/2	3 1/2	18 1/2	+14 1/2
Eng. Pub. Service	37 1/2	16 1/2	33 1/2	+17 1/2
Erie R. R.	20 1/2	12 1/2	17 1/2	+4 1/2
Gair (Robert)	10 1/2	4 1/2	9 1/2	+4 1/2
Gen. Am. Invest	24 1/2	12 1/2	17 1/2	+4 1/2
Gen. Elec.	49 1/2	37 1/2	47 1/2	+8 1/2
Gen. Motors	77 1/2	62 1/2	75 1/2	+11 1/2
Gen. Tire & Rub.	46 1/2	26 1/2	42 1/2	+15 1/2
Graham-Paige Mot.	12 1/2	5 1/2	10 1/2	+4 1/2
Gulf Mob. & Ohio	30 1/2	14 1/2	23 1/2	+8 1/2
Hayes Mfg.	14 1/2	6 1/2	13 1/2	+6 1/2
Houston Oil	23 1/2	12 1/2	20 1/2	+7 1/2
Hudson Motor	34 1/2	14 1/2	30 1/2	+15 1/2
Hupp Motor	9 1/2	3 1/2	8 1/2	+4 1/2
Illinois Central	44 1/2	19 1/2	43 1/2	+20 1/2
Interlake Iron	14 1/2	8 1/2	13 1/2	+4 1/2
Int. Nick. Can.	30 1/2	28 1/2	37 1/2	+8 1/2
Int. Paper	48 1/2	19 1/2	48 1/2	+27 1/2
Int. Tel. & Tel.	38 1/2	18 1/2	29 1/2	+10 1/2
Jones & L. St. I.	46 1/2	27 1/2	41 1/2	+14 1/2
Laclede Gas	7 1/2	4 1/2	6 1/2	+3 1/2
Lehigh C. & N.	17 1/2	12 1/2	15 1/2	+3 1/2
Leh. Val. R. R.	17 1/2	6 1/2	12 1/2	+4 1/2
Lobby, McN. & L.	13 1/2	7 1/2	12 1/2	+4 1/2
Lockheed Air.	42 1/2	19 1/2	42 1/2	+22 1/2
Marine Midland	11 1/2	7 1/2	10 1/2	+2 1/2
Mo-Kan-Texas pf.	49 1/2	16 1/2	45 1/2	+27 1/2
Nash-Kelvinator	25 1/2	15 1/2	23 1/2	+7 1/2
Nat. Pow. & Lt.	14 1/2	7 1/2	10 1/2	+3 1/2
N.Y. Central R. R.	35 1/2	21 1/2	33 1/2	+10 1/2
North Amer. Co.	31 1/2	19 1/2	20 1/2	+9 1/2
Northern Pacific	38 1/2	17 1/2	35 1/2	+14 1/2
Ohio Oil	23 1/2	16 1/2	21 1/2	+3 1/2
Packard Motor	12 1/2	5 1/2	10 1/2	+5 1/2
Pan. Am. Airways	29 1/2	16 1/2	25 1/2	+7 1/2
Paramount Pictures	57 1/2	27 1/2	55 1/2	+26 1/2
Penn. R. R.	46 1/2	33 1/2	42 1/2	+8 1/2
Pepsi-Cola	38 1/2	21 1/2	35 1/2	+10 1/2
Pub. Svc. N.J.	27 1/2	17 1/2	24 1/2	+7 1/2
Pure Oil	24 1/2	17 1/2	22 1/2	+5 1/2
Radio Corp.	19 1/2	10 1/2	17 1/2	+7 1/2
Radio-Keith-Orph.	18 1/2	7 1/2	16 1/2	+7 1/2
Repub. Steel	33 1/2	19 1/2	30 1/2	+10 1/2

Stock	High	Low	Close	Net Change
Sinclair Oil	21 $\frac{1}{2}$	14 $\frac{1}{2}$	19 $\frac{1}{2}$	+3 $\frac{1}{2}$
Socony-Vacuum	18 $\frac{1}{2}$	12 $\frac{1}{2}$	17 $\frac{1}{2}$	+3 $\frac{1}{2}$
Southern Pacific	62	38 $\frac{1}{2}$	58 $\frac{1}{2}$	+16 $\frac{1}{2}$
Std. G & E. $\frac{3}{4}$ pf.	33 $\frac{1}{2}$	2 $\frac{1}{2}$	32 $\frac{1}{2}$	+30
Std. Stl. Sprg.	20 $\frac{1}{2}$	9 $\frac{1}{2}$	18 $\frac{1}{2}$	+8 $\frac{1}{2}$
Studebaker Corp.	33 $\frac{1}{2}$	18 $\frac{1}{2}$	31 $\frac{1}{2}$	+11 $\frac{1}{2}$
Twent. C-Fox	45 $\frac{1}{2}$	26 $\frac{1}{2}$	41 $\frac{1}{2}$	+12 $\frac{1}{2}$
United Aircraft	38 $\frac{1}{2}$	25 $\frac{1}{2}$	34 $\frac{1}{2}$	+4 $\frac{1}{2}$
United Corp.	5	1 $\frac{1}{2}$	4 $\frac{1}{2}$	+3 $\frac{1}{2}$
U.S. Steel	85 $\frac{1}{2}$	58 $\frac{1}{2}$	81 $\frac{1}{2}$	+20 $\frac{1}{2}$
Warner Bros. Pict.	35 $\frac{1}{2}$	13 $\frac{1}{2}$	32 $\frac{1}{2}$	+19 $\frac{1}{2}$
Willys-Overland	20 $\frac{1}{2}$	16 $\frac{1}{2}$	21 $\frac{1}{2}$	+3 $\frac{1}{2}$
Wilson & Co.	19 $\frac{1}{2}$	10 $\frac{1}{2}$	17 $\frac{1}{2}$	+7 $\frac{1}{2}$

Bond Market. Pressure of idle funds of financial institutions, corporations and individuals seeking investment strengthened bond prices and depressed interest rates to a record low level. The most significant development in the Government bond market was the special strength of Treasury obligations eligible for bank investment. Becoming convinced that low interest rates would continue for an indefinite period because of the Government's effective control over the money market, banks reached out for longer-term issues in order to increase their earnings. Since many of the outstanding longer-term issues are not eligible for bank investment for a number of years, a growing discrepancy developed between yields of bank eligible and non-bank eligible Treasury issues. Thus, the Treasury 2½s of 1972 which were not eligible for bank investment closed the year at 101½ $\frac{32}{32}$, whereas the 2½ percent issue maturing in the same year that is eligible for bank investment closed at 108 $\frac{24}{32}$.

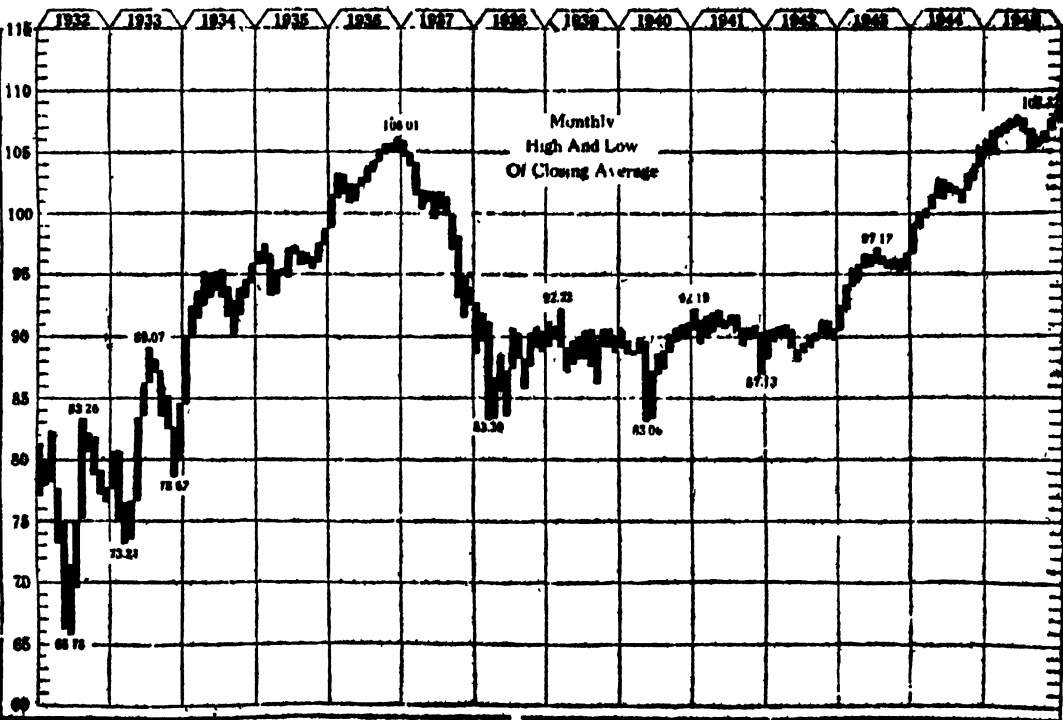
The average yield of United States Government obligations maturing in 15 years or longer was 2.3 per cent at the end of the year, as compared with 2.48 per cent at the end of 1944. The average yield of partially tax-exempt issues with similar maturities was 1.5 per cent, as compared with 1.87 per cent at the end of 1944. Late in the year, the market for all Government securities strengthened because of the belief that the Victory Loan drive provided the last opportunity for a long time to come to acquire such obligations by direct subscription at par.

Since new corporate bond issues for the year were chiefly for refunding, the supply of corporate bonds remained limited and their quotations strengthened in sympathy with those of Federal obligations. Yields on bonds of various ratings for December, 1945 compared as follows with those of the same month of the previous year:

Rating	1944	1945
Aaa	2.70	2.61
Aa	2.76	2.68
A	2.98	2.79
Baa	3.49	3.10

Bond dealings on the New York Stock Exchange aggregated \$2,261,000,000, the smallest since 1941. The decline in turnover reflected the dwindling proportion of speculative issues, in which turnover is usually greatest. The turnover in bonds in 1944 aggregated \$2,694,000,000. The yield of 15 high-grade municipal bonds averaged 1.64 in December, as compared with 1.87 per cent in December, 1944. Average yields on a group of industrial obligations declined from 2.74 in December, 1944 to 2.64 in

Dow-Jones Average of 40 Bonds



THIRTEEN-YEAR MOVEMENT OF 40 STANDARD BONDS

the final month of 1945; on 40 railroad bonds from 3.25 per cent to 2.96, and on 40 public utility obligations from 2.96 per cent to 2.79.

New Financing. The Federal Government accounted for the bulk of the year's new security issues. The public debt increased by \$46,803,000,000 during 1945, of which \$7,822,000,000 was obtained through net sales of non-marketable war savings bonds, and \$28,838,000,000 through issues of marketable bonds. Another \$7,754,000,000 was obtained through net sales of certificates of

purchases of Government securities, \$18,000,000,000 was withdrawn in the form of currency, and the other \$50,000,000,000 represented additions to deposits of individuals and corporations.

The increase in corporate liquid resources placed American corporations in the strongest financial position ever attained. At the close of 1945, all corporations held almost \$30,000,000,000 of Government securities and more than \$20,000,000,000 of cash. These totals were apart from large sums held by unincorporated businesses. The Securities and

TABLE 3—LIQUID SAVINGS OF INDIVIDUALS
(In billions of dollars)

Type	1940	1941	1942	1943	1944	1945		
						First Quarter	Second Quarter	Third Quarter
Currency and bank deposits	+3.0	+4.9	+11.4	+15.3	+16.9	+5.0	+2.7	+6.6
Savings and loan associations	+2	+4	+3	+6	+8	+2	+3	+3
Insurance and pension reserves								
Private insurance	+1.7	+2.1	+2.5	+3.1	+3.4	+9	+9	+8
Government insurance	+1.2	+1.8	+2.4	+3.8	+4.7	+1.3	+1.5	+1.3
Total	+2.9	+3.8	+4.9	+6.9	+8.1	+2.2	+2.5	+2.1
Securities								
U. S. Savings bonds	+9	+2.8	+8.0	+11.1	+11.8	+1.4	+3.0	+9
Other U. S. Government	-4	+8	+1.9	+2.7	+3.6	-1	+2.2	-1
State and local governments	-1	2	1	2	-1	0	0	-1
Corporate and other	-5	-5	+3	-2	-3	-3	-5	+4
Total	-2	+2.9	+10.1	+13.8	+15.0	+1.0	+4.7	+1.1
Total Liquid Savings	5.9	12.0	26.7	36.6	40.8	8.4	10.2	10.1

Source: Securities and Exchange Commission

indebtedness maturing within one year, and \$609,000,000 through the sale of additional Treasury bills. A total of \$3,674,000,000 was obtained from the sale of special issues of Treasury obligations, chiefly to the social security funds.

State and municipal financing continued at low ebb, pending the time when large scale public works could again be inaugurated by these government bodies. Such offerings aggregated \$795,000,000, which compared with \$639,000,000 in 1944. Public offerings of obligations of Federal credit agencies aggregated \$938,000,000, as compared with \$433,000,000 in 1944. Corporate financing increased materially, both for new capital and for refunding. Refunding was encouraged not only by the decline in interest rates, but also by the fact that premiums on called bonds and expenses could be charged against the excess profits tax. Therefore, many bond issues were refunded even though only small reductions in interest payments would result for the issuer.

New financing for 1945, except for direct Treasury obligations, aggregated \$7,917,000,000, which compared with \$4,153,000,000 in 1944. This was the highest level reached since 1929.

The Nation's Savings. Net savings of individuals during 1945 were estimated by the Department of Commerce at \$35,000,000,000, as compared with \$39,900,000,000 in 1944. The distribution of these savings, and their aggregate volume are shown in Table 3.

Explaining the impact of war financing upon the nation's monetary system, Undersecretary of the Treasury Daniel W. Bell pointed out that the Government spent \$323,000,000,000 between July 1, 1940 and June 30, 1945, approximately the period in which World War II dominated United States Treasury financing. Of this vast sum, which amounted to almost 40 percent of all spending that took place throughout the country in these five years, only \$133,000,000,000 was raised through taxation. This left a deficit of \$190,000,000,000, of which \$122,000,000,000 was obtained through sales of Federal securities to non-bank investors, while banks absorbed \$68,000,000,000. Of the \$68,000,000,000 of deposits thus created through bank

Exchange Commission reported current assets and liabilities of all United States corporations except banks and insurance companies as follows:

TABLE 4—CURRENT ASSETS AND LIABILITIES OF ALL UNITED STATES CORPORATIONS
(In billions of dollars)

	Dec. 31 1939	Dec. 31 1944	Sept. 30 1945
Current Assets			
Cash on hand and in banks	10.9	23.0	25.7
United States Government securities	2.2	20.8	20.6
Receivables from Government	0.0	4.7	3.3
Other notes and accounts receivable	22.1	22.9	22.0
Inventories	18.0	26.0	25.9
Other current assets	1.4	1.4	1.7
Total Current Assets	54.6	98.8	99.2
Current Liabilities			
Advances and prepayments, Government	0.0	1.8	1.3
Other notes and accounts payable	21.9	26.4	23.9
Federal income tax liabilities	1.2	10.3	14.6
Other current liabilities	6.9	8.8	8.5
Total Current Liabilities	30.0	53.3	48.3
Net Working Capital	24.6	45.5	50.9

Regulatory Developments. The persistent advance in stock prices was recognized as resulting, at least in part, from the expansion of the money supply, and thus as reflecting to a degree inflationary forces present in the economy. However, some measures were taken or proposed by regulatory authorities to check expansion of trading and rising prices.

The Board of Governors of the Federal Reserve System raised margin requirements from 40 to 50 per cent in February, and from 50 to 75 percent in July. On March 5, 1945, the New York Stock Exchange sought to discourage shoestring speculation in low-priced shares by raising from \$5 to \$10 the minimum price of stocks that could be carried in margin accounts, and established an initial margin requirement of 10 points on stocks selling over \$10 a share. At the same time, a minimum equity of \$1,000 was required for margin accounts. No such minimum had been set previously.

The most drastic proposal to check security

market speculation was that advanced in March by Chairman Marriner S. Eccles of the Board of Governors of the Federal Reserve System. Mr. Eccles urged that, beginning Jan. 1, 1945, a special tax of 90 percent be imposed on capital gains derived from the sale of assets held less than two years. This would apply only to securities and real estate acquired after Jan. 1, 1945, so as not to discourage liquidation of those bought previously. The special tax rate would decline by 10 percent or more each year after 1945, until it would return to the rate prevailing before the law was passed. In advocating this plan, Mr. Eccles referred to the prevailing 25 percent long-term capital gains tax as "the most serious gap in the line of defense against inflationary forces." However, little support developed for this plan within Congress, and with the end of the war the national legislature was much more interested in tax reduction than in the imposition of new taxes.

JULIUS I. BOGEN.

FINE ARTS, Commission of. The official advisory body of the U.S. Government upon matters of art, composed of seven members appointed by the President. Chairman: Gilmore D. Clark. It is not to be confused with the Section of Fine Arts of the Public Buildings Administration, which was formerly charged with the selection and placing of designs in public buildings but was discontinued in 1943.

FINLAND. A republic of Northern Europe. Capital, Helsinki (Helsingfors).

Area and Population. Finland's original area of 149,588 sq. mi., including about 11 percent of inland water area, was reduced to 134,253 sq. mi. by the Soviet-Finnish peace treaty of Mar. 12, 1940, and was further reduced to about 127,600 sq. mi. under the terms of the armistice of Sept. 19, 1944, following the second war with Soviet Russia. The estimated population of the prewar area on Jan. 1, 1943, was 3,887,217. About 89 percent of the inhabitants speak Finnish and most of the remainder Swedish. Estimated populations of the chief cities on Jan. 1, 1940, were: Helsinki (Helsingfors), 304,965; Tampere (Tammerfors), 76,730; Turku (Åbo), 74,351; Viipuri (Viborg)—ceded to the Soviet Union—74,247; Vaasa (Vasa), 32,695. Swedish place names are given above in parentheses.

Government. The Constitution of July 17, 1919, vested executive powers in a President elected for six years by 300 electors, chosen in the same manner as members of the Diet. Legislative power rests with the unicameral Diet and the President. The 200 members of the Diet are elected by direct vote of all citizens, male and female, 24 years or more of age. The standing of the parties in the Diet elected July, 1939, was: Social-Democrats, 85; Agrarians, 57; Coalition Party, 25; Swedish People's Party, 18; IKL (Fascist group) 8; Progressives, 7. For the present composition of the Diet, see **EVENTS**, below. President of the republic is Field Marshal Baron Carl Gustav Mannerheim, who was elected to this post on Aug. 1, 1944, upon the resignation of President Risto Ryti. Under the emergency legislation passed at that time (see **YEAR BOOK** for 1944, p. 217) some functions until then exercised by the President were transferred to the Premier. Juho K. Paasikivi became Premier on Nov. 17, 1944.

Education and Religion. School attendance in 1938-39 was: elementary, 403,403; secondary, 50,580; university and schools for higher education, 8,752; vocational and technical, 20,583. Less than

1 per cent of the adult population was illiterate in 1930. War damage to educational institutions in 1939-40 was estimated at 333,000,000 marks. The Technical University of Helsinki, where damage totaled 20,000,000 marks, was repaired and reopened by Oct. 1, 1940. The population on Jan. 1, 1938, included 3,680,237 Lutherans, 70,887 Greek Catholics, 9,840 Baptists and other Evangelical church members, 1,551 Roman Catholics, 1,755 Jews, and 360 Moslems.

Production. In 1930 60 per cent of the working population was engaged in agriculture and 16.8 per cent in industry, but Finland produced only about four-fifths of its agricultural requirements in the period before 1939. The two wars with Russia in 1939-40 and 1941-44 placed a great strain upon the Finnish economic system. The 1942 grain harvest of 425,000 metric tons was about 70 per cent of normal. The yield of sugar beets was 132,000,000 lb., or 50 per cent more than in 1941; of potatoes, 2,136,200,000 lb. (1,744,600,000 in 1941). The livestock census of March, 1942, showed 273,838 horses, 1,487,663 cattle, 352,016 sheep, 236,566 swine. The output of sawn timber in 1943 was 500,000 standards (of 1,980 bd. ft.), compared with 450,000 standards in 1941 and a normal production of about 1,200,000 standards. The 1941 production of plywood was 1,059,399 cubic ft.; chemical wood pulp, 590,000 tons; mechanical wood pulp, 20,000 tons; newsprint, about 50,000 tons; other paper, about 190,000 tons. Manufacturing is mainly in agricultural or forest products.

Foreign Trade. In 1944 imports were valued at 8,919,600,000 Finnish marks (12,876,000,000 in 1943); exports, 6,580,000,000 Finnish marks (8,712,000,000 in 1943). In 1945 imports totaled 6,820,000,000 Finnish marks; exports, 11,471,000,000 Finnish marks, including 4,171,000,000 marks for war reparations.

Events, 1945. Finland's war with Germany continued through the early months of 1945. Retreating slowly toward North Norway, the Nazis' Lapland Army hung on stubbornly to their winter positions in the northwestern corner of Finland.

On March 3, the Helsinki Government released a declaration, dated March 1, that formalized the existing state of war between Finland and Germany since the first clashes on Sept. 15, 1944. On April 26 a communiqué announced that the Germans had been "practically driven out of Finland," but some fighting continued right up to the formal surrender of Germany on May 8.

General Elections. Finland's first parliamentary election in six years,—and the first election to be held in any European country freed from the Nazis—took place, as scheduled, on March 17. Of the two million eligible voters, 1,497,533 went to the polls in the highest vote ever recorded in that country. By all accounts the election was completely free and honest and no attempt was made either by Russia or by the Allied Control Commission to influence the vote.

The results of the election were much as expected. The Social-Democrats, whose leaders, Väinö Tanner in particular, had actively supported Finland's disastrous war policy, lost heavily, retaining only 52 of their 85 seats in the last Diet. Virtually all the dissident Social-Democratic vote, and a great deal more, went to the newly organized coalition known as the Popular Democrats, in which the Communists are predominant. This group, at its first electoral test, obtained 358,988 votes, as compared with 368,201 for the Social-Democrats, and gained 51 seats in Parliament.

On the right, the Agrarian League came out

strongest with 244,384 votes and 46 seats, a loss of eleven; the conservative Coalition Party gained three seats, for a total of 28, and polled 121,733 votes. In the center, the Swedish People's Party obtained 132,530 votes and 16 seats, two less than before. The Progressives, with 58,858 votes and seven seats, maintained their position. The IKL, or Finnish Nazi Party, was barred from the poll, but various other small groups also participated.

Thus, the Left (Social-Democrats and Popular Democrats) won a slight majority of seats—103 out of a total of 200—in the Diet, but the old animosity between the two groups persisted, ruling out any possibility of a coalition between them.

Instead, Premier Juho K. Paasikivi, who resigned on April 9 but was immediately asked by the President to form a new government, again brought all major parties together in a revised coalition Cabinet, reflecting the changed composition of the Diet. Accordingly, ten out of the 18 new Cabinet ministers were selected from the Left, and eight from the Right and Center; of the five Popular Democrats included, three were outright Communists and two were dissident Socialists. The swing to the left was more clearly indicated in a general reshuffle of Cabinet posts which left the Communist leader Yrjö Leino in charge of the Ministry of Interior (and thereby of the police) while another Popular Democrat of note, Johan Helo, took over the department of education. Carl Johan Enckell, a Swedo-Finn, remained at his post as Minister of Foreign Affairs.

In presenting his new Cabinet, which took office on April 17, Premier Paasikivi declared that it would follow the same foreign policy as its predecessor, "based on Finland's freedom and independence." At home, he promised, the Government would do everything in its power to sweep away the remains of German and Fascist influence.

A Military Plot and Purge. Before long, the radical and energetic new Minister of Interior Leino was able to demonstrate his determination to do away with the sins of the past. Early in May, discovery of a secret arms cache in the Uleaborg district led to an extensive hunt for hidden weapons in the course of which well-stocked arms and ammunition depots were unearthed all over the country. The investigation brought to light that high-ranking officers of the General Staff had minutely organized this concealment of arms in flagrant violation of the armistice. As a result of these disclosures, the Chief of the General Staff, General Airo, two colonels, Nihtilä and Haahti, and a number of lesser officers were arrested in mid-July. General Axel E. Heinrichs, commander-in-chief of the Army was forced to yield his post to Lt. General J. Lindquist. The sensational affair continued to reverberate throughout the summer and on Sept. 22 Mr. Leino announced that in all 200 persons had been arrested in connection with it. By that time, the plot, which apparently had aimed at an armed uprising against the Paasikivi regime, had been fully smashed.

Relations with Russia. The timely discovery and vigorous suppression of the military plot helped greatly to dissipate Russian suspicions which had been accumulating in the earlier part of the year. Moscow was dissatisfied with the way Finland fulfilled a number of armistice conditions, in particular those relating to the disbanding of "anti-Soviet" organizations and the trial of alleged war criminals. In both respects, Finland proved to be slow rather than uncooperative. The purge of the General Staff, preceded by abolition of the traditionally anti-Russian Civic Guards' Corps, and followed by

the indictment of pro-German leaders (see below), cleared the atmosphere and by the end of the year few issues remained between Finland and Russia.

In the matter of reparations, Finland bent all its energy to fulfill the armistice obligations fully and on time. However, at the close of the first year, ending Sept. 18, there was a slight deficit in the stipulated quota of \$50,000,000 worth of deliveries. This was due to difficulties in obtaining enough raw materials and machinery for the production of the stipulated amount of metal goods; included in the deliveries were 300,000 tons of merchant shipping valued at \$14,000,000.

These reparations payments accounted for about 85 percent of all Finnish exports during that period, leaving only a slim margin of foreign exchanges for which compensation was received. As a result, Finland's economic situation showed little improvement during the year. There was, as in other European countries, an acute shortage of coal that hampered industrial recovery. No early relief was in sight for the general scarcity of consumer goods and the supply of food remained, throughout the year, just above starvation levels. Russia supplied some cereals and a little coal and Sweden provided assistance by granting Finland a \$50,000,000 credit.

The outlook for 1946 was gloomy. Although Russia, as a result of negotiations conducted in October in Moscow by Minister Helo, agreed to spread its total reparations claim of \$300,000,000 over eight years instead of six, the amount payable in 1946 was increased by an additional demand for \$14,000,000 to make up for the damage caused in East Karelia by the Finnish army during the war. Inasmuch as payments effected in 1945 had strained Finnish resources to the limit, it appeared doubtful whether Finland could meet the next year's quota without credits from abroad.

These difficulties notwithstanding, Finland's relationship with Russia on the whole developed satisfactorily. There were practically no incidents between the few Russian soldiers stationed in the country and the population. Premier Paasikivi in an address on the first anniversary of the armistice, on Sept. 19, praised the moderation and understanding shown the Finns by the Soviet Chairman of the Allied Control Commission, Gen. Andrei A. Zhdanoff.

Diplomatic Rehabilitation. At the Potsdam Conference of the Big Three in July agreement was reached on an early resumption of diplomatic relations with Finland. Moscow moved first, appointing a minister to Helsinki on Aug. 6. The United States and Great Britain followed suit two weeks later. Simultaneously the Allied Control Commission in Helsinki lifted a number of restrictions on Finnish shipping and aviation.

The question of a peace treaty between the Allies and Finland was taken up at the Foreign Ministers' meeting in September, in London, but was left hanging fire when the conference broke up without practical agreements. On Nov. 5 the State Department removed all Finnish citizens and firms from its economic blacklist, thus clearing the way for the restoration of normal trade relations between the two countries.

Presidential Crisis. In the latter part of the year, two closely connected issues kept Finland astir: the war guilt question and President Mannerheim's retirement.

The position of the aging President had been awkward from the moment the armistice was signed. There never was any question but that Mannerheim, as commander-in-chief of the Fin-

nish Army, bore a large share of responsibility for Finland's involvement at the side of Germany. The Soviet press had frequently and viciously attacked him as a leading war criminal. The Finnish Communists were not less outspoken in their criticism of the President.

The events of 1945 increasingly weakened Mannerheim's already shaky position. He had hinted that he would resign after the elections of March 17, but failed to do so, although the swing to the left placed some of his personal enemies into positions of great power. The scandal of the secret arms caches, involving many of the President's friends and close associates, further sapped his prestige. When the war guilt issue, after many postponements, finally came up for action, Mannerheim's position became untenable.

Under the terms of the armistice, Finland had bound herself to prosecute not only "war criminals," i.e. persons guilty of crimes committed in connection with the war, but also the so-called "war responsables," a term applied to former government leaders such as President Risto Ryti, Premier Jukho W. Rangell, and Finance Minister Väinö A. Tanner.

Aside from the Communists and other radicals, few people in Finland were eager to comply with this provision of the armistice. The general tendency, shared by Paasikivi, was to let bygones be bygones if it could be done without arousing Russia. The Soviets, far from condoning the past, kept prodding the Finns and eventually gave clearly to understand that they would take matters into their own hands if the Finnish Government failed to prosecute the war responsables.

In May the Diet set up a special investigating body, the so-called "Hornborg Committee," (so named after its chairman, Eric Hornborg, a Swedo-Finnish scholar and lawyer) which rendered a lengthy report on July 28. The report charged that some of the former leaders had "passively and probably consciously" allowed Finland to drift into the war, but it refrained from making personal charges.

Nobody was satisfied with the Hornborg Report, least of all Moscow and General Zhdanoff. After a formal protest delivered by the latter, Paasikivi reversed his stand on the war guilt issue and adopted the view that the national interest demanded speed and vigor in the prosecution of war criminals. On Aug. 15 he introduced in the Diet a bill authorizing the formation of special courts to try war criminals and political leaders responsible for the war. The bill encountered heavy opposition but was finally passed early in September. About the same time it was learned in Helsinki that President Mannerheim was seriously ill and had been hospitalized.

Mannerheim's illness (a catarrhal infection) was real, but its gravity was more of a diplomatic nature. On Oct. 19 the President turned over his functions to Paasikivi on the ground that he was unable to exercise them because of illness. Political circles in Helsinki, however, admitted freely that Mannerheim really had stepped down so as not to identify himself with the forthcoming trials of war responsables, several of whom were among his personal friends. On Nov. 4 Mannerheim left Finland by ship for Madeira for a prolonged rest cure. There was little doubt that his departure had a political background and it seemed unlikely that he would ever resume his functions. In the meantime, Premier Paasikivi also took over the office of President.

War Trials Start. The long-delayed trial of the

principal "war responsables" finally began on Nov. 15 in Helsinki. Eight persons were named as defendants. They included, in addition to the aforementioned Ryti, Rangell, and Tanner, former Premier Edwin Linkomies, former Foreign Minister Karl Henrik Ramsay, former Interior Minister Antti Kukkonen, former Finance Minister Tyko Reinikka, and the former Finnish Minister to Berlin, Toivo Kivimäki; all were arrested on Nov. 8.

Highlights of the indictment, presented by Prosecutor Toivo Tarianne, were the charges that the defendants, during the armistice period of 1940-41, had maintained Finland in a virtual state of war, and that President Ryti, in June, 1941, had concluded a military pact with Germany. The prosecution also involved Mannerheim in its charges. In the absence of the President, a deposition of his was read into the court records in which Mannerheim described the Ryti-Ribbentrop agreement of June, 1944, (see 1945 Year Book) as "a patriotic action," and declared, "I always defended, and will always defend the Ryti-Ribbentrop agreement." On Nov. 17 the trial was adjourned until Dec. 10 to give the defendants time to prepare their defense.

JOACHIM JOESTEN.

FIRE PROTECTION. During the early months of 1945, fire in a form more devastating than ever before witnessed in world history was visited upon the cities of Germany and Japan. The terrific toll of death and destruction caused by the aerial incendiary attacks on the metropolitan centers of our enemies can be appreciated only by those who have actually seen the results. The so-called "firestorms" reported in various German cities exceeded in intensity and devastating effect any recorded conflagration of peacetime, and rendered fire fighting efforts completely futile. "Firestorm" is a mass of fresh air moving at hurricane rate to replace superheated rising air. "Firestorms" were of sufficient power to uproot trees of all sizes and blow down doors and windows.

Meanwhile, here in the United States the trend of ever rising fire losses continued apace. According to the National Board of Fire Underwriters, the national fire loss was estimated at \$455,329,000, the largest annual loss since 1930. This estimate is conservative as it does not include a number of large losses in government-owned properties which are not reported in the usual manner. For purposes of comparison the annual fire losses for the past ten years follow:

1936.....	\$266,659,449	1941.....	\$303,895,000
1937.....	254,950,423	1942.....	314,295,000
1938.....	258,477,944	1943.....	373,000,000
1939.....	275,102,119	1944.....	423,458,000
1940.....	285,878,607	1945.....	455,329,000

No less than 150 fires, each of which resulted in a loss of a quarter million dollars or more, occurred in the United States, Canada, and Alaska. Seventeen of these were in Canada and two in Alaska. The number of these large loss fires represents an increase of 33 per cent over the number reported to the National Fire Protection Association for 1944 and an increase of 240 per cent during the past five years.

The largest loss of the year occurred on Sept. 15 when fire, following collapse of three U.S. Navy blimp hangars during a hurricane which struck the Richmond (Fla.) Naval Air Station, destroyed 366 Navy planes, 25 Navy patrol blimps, and 150 automobiles. The loss from this fire has been variously estimated at more than \$30,000,000. This

fire is of particular interest also because of the extensive use of flameproofed timber in the hangar construction. Nearly 80 per cent of the 9,000,000 square feet of timber used in the construction of these hangars had been treated by a pressure impregnation process to meet Navy specifications. This flameproofed timber gave a good account of itself, resisting ignition except in areas where large quantities of gasoline or other flammable liquids were present.

Probably no fire of the year attracted so much nationwide publicity, as that which followed the collision of an Army bombing plane with the Empire State Building in New York on the foggy morning of July 28. The plane tore a huge hole in the north wall of the skyscraper at the 78th and 79th floors, and burning gasoline spread over the area, a considerable part of which was either vacant or used for storage purposes. Fourteen persons were killed and twenty-five injured in this disaster.

The largest individual losses of life were accounted for by a dust explosion in a grain elevator at Port Arthur, Ontario, on Aug. 7 and an explosion followed by several fires in a coal mine at Pineville, Kentucky, on Dec. 26. The toll in the first instance was 22 dead and 27 injured. The coal mine disaster took 24 lives. On Jan. 31, fire in a small foster home for infants and young children at Auburn, Maine, took the lives of 16 children and a nurse. On Christmas eve, a Christmas tree fire in a hospital for old people at Hartford, Connecticut, cost 16 lives.

During the first eight months of 1945 the wartime problems of fire protection continued. With the coming of peace a new set of problems confronted the fire protection profession. The reconversion of industrial plants to the production of peace time commodities presented great possibilities for serious fires unless extreme care was taken to maintain protective facilities and services during the conversion period. At the year's end the fear of serious fires in plants under conversion had not been realized.

With the ending of the war, the problem of fire protection of the tremendous quantity of surplus property became more acute, and during the closing months of 1945 steps were taken by the Reconstruction Finance Corporation to adopt measures of protection.

The acute shortage of housing facilities and the pressing need for new housing presents a very real danger in the possibility of a breakdown in existing building regulation which would permit the erection of definitely hazardous structures. Many cities are reviving interest in building codes and there is considerable activity in the revision of existing codes. People are demanding shelter, however, and even the elementary rules of fire-safe construction may be broken unless careful and intelligent guidance is given in each community.

As the result of selective service, the highly paid jobs in war industries, and the wartime scarcity of fire apparatus, municipal fire departments have been left in a weakened condition. Thousands of servicemen, particularly in the Navy have received excellent training in fire fighting techniques. Many of these men will undoubtedly become available to municipal fire departments in the year ahead, but fire departments generally are faced with the responsibility for making the fire service attractive to these trained recruits.

1945 saw the end of the Office of Civilian Defense which since 1941 had been a factor in fire protection throughout the country. With it went

the States War Inspection Service, an OCD sponsored scheme for the fire inspection of important industrial plants, which for some two years had rendered valuable service.

A development of great interest to fire protection engineers was the adoption by the War Manpower Commission of an adequate and accurate definition of fire protection engineering. That there is such a separate and distinct profession has not been generally recognized, and this official definition should help materially.

In the field of fire prevention education, interest and activity continued to increase. Fire Prevention Week in October, 1945, was probably more widely observed throughout the United States and Canada than ever before. Winner in the contest sponsored by the National Fire Protection Association for excellence in the observance of Fire Prevention Week was Memphis, Tenn. Jersey City, N. J., and Chicago, Ill., placed second and third respectively.

In the Inter-Chamber Fire Waste Contest conducted by the National Fire Waste Council of the U. S. Chamber of Commerce for year-round fire prevention activities, Wichita, Kansas emerged as winner of the grand award for its performance in 1944.

CHARLES SUMNER MORGAN.

FISCAL SERVICE. A division of the U.S. Department of the Treasury which consists of the following: Office of the Fiscal Assistant Secretary (Edward F. Bartelt); Bureau of Accounts (Vacant); Bureau of the Public Debt (William S. Broughton, Commissioner); Office of the Treasurer of the United States (William A. Julian, Treasurer).

FISH AND WILDLIFE SERVICE. Although still on a wartime basis during most of 1945, the Fish and Wildlife Service devoted as much effort as possible, with limited personnel, to the business of providing the greater wildlife resources that will be required and demanded by the American nation for public enjoyment now that the war has ended. Hunting and fishing will greatly increase because great numbers of young men who under normal civilian life would not have had the opportunity have become thorough outdoorsmen. Thousands will want to hunt and fish who previously sought other recreation.

In an effort to re-establish one of America's favorite game fishes in the rivers of the northern Atlantic coast, the Service planted about 68,000 salmon in the rivers of Maine in the fall of 1945. Atlantic salmon were planted in the St. George River and the east branch of the Penobscot, and silver salmon in the Pemaquid and Ducktrap Rivers. All the salmon were reared from the egg stage at the Federal hatchery at Craig Brook, Maine.

The 108 Federal fish hatcheries, maintained in 42 states, produced a total of 5,740,067,958 eggs, fry, and fingerling, or larger fishes during 1944. Nearly 4 million fishes were supplied for the stocking of 5,446 farm fish ponds.

Under the terms of the Pittman-Robertson Act, \$880,000 was apportioned among the states for the restoration and development of their wildlife resources for the fiscal year beginning July 1, 1945. Since participating states are required to contribute 25 percent of the cost of the projects, a total of \$1,179,999.99 was made available for wildlife restoration projects. During the past fiscal year 168 projects, obligating \$1,040,040, were approved.

The nation-wide system of wildlife refuges con-

tinued to be a most important safeguard to the country's waterfowl populations and to provide haven during some part of the year for at least one-fourth of the migratory waterfowl in North America. In spite of war conditions, waterfowl marshes on the refuge area improved—with a secondary result that the production of fur animals has steadily increased. During the 1944-45 trapping season, 222,421 fur animals were taken on refuge areas, of which 214,432 were muskrats. Commercial fishermen removed 1,786,499 pounds of rough fishes from refuge waters. Recreational fishing totaled 141,257 man-days and resulted in the taking of 697,703 fishes. Revenue from economic use on national wildlife refuges, including the disposition of big game animals, fur animals, and surplus products, amounted to \$275,555 during the past year.

On the basis of its annual January inventory of the migratory waterfowl in the United States, the Service estimated the 1945 population at 105,500,000, a decrease of approximately 20,000,000 from the 1944 figure. The number of banded birds reported during the year was 142,569, of which 31,113 were migratory waterfowl. The grand total since the inception of the work under Government auspices is in excess of 5,600,000. Recovery records to the number of 14,759 were obtained during the year, bringing the total to 346,243.

The 65 U.S. game management agents, working singly or in cooperation with State officers, obtained 2,328 convictions, fines and costs of \$80,685.72, and jail sentences of 964 days. As of Sept. 28, 1,458,628 "duck stamps" were reported sold during the 1944-45 season. For the fiscal year ended June 30, 1944, 7,846,168 fishing licenses and 7,505,258 hunting licenses were sold by the various states.

The waterfowl control program in California proved highly successful in abating damages to agricultural crops. In other depredation areas game agents worked with farmers in frightening ducks from unharvested crops.

Notable progress was made in the Service's wildlife research laboratories at Denver, Colo., and Bowie, Md., in the search for new rodenticides through the development and field demonstration of the utility of a compound called "1080." This material, sodium fluoroacetate, poisons rodents as well as certain other mammals and birds. It is readily soluble in water, has only a slight taste in the dilutions in which it is commonly used, and is adaptable to most of the methods used in rodent bait preparation. Extensive controlled experiments as to the effects of DDT on fish and wildlife were begun at the Patuxent Research Refuge at Bowie, Md.

As a result of a relentless war against predatory animals in the West, tens of thousands of lambs, calves, and turkeys went to market this year instead of into the maws of hungry coyotes and bobcats. A total of 112,451 predators were taken in Federal-cooperative control operations in spite of wartime handicaps caused by a shortage of trained hunters, automotive equipment, and various ingredients of predator control baits. The total take consisted of 102,979 coyotes, 7,325 bobcats and lynx, 1,365 wolves, 619 stock-killing bears, and 163 mountain lions.

A total of 76,964 sealskins were taken during the summer sealing period on the Pribilof Islands of Alaska, a 61 per cent increase over the 47,652 taken last year. The 1945 census of these animals indicated that there were 3,155,268 animals in the herd, an increase of 209,605 over the 1944 total.

When the Federal Government took over direct management of the herd less than 35 years ago, fewer than 120,000 animals remained following decades of slaughtering.

The Office of the Coordinator of Fisheries, which was established for the handling of the wartime problems of the fishery industry, was discontinued at the end of 1945.

The Division of Commercial Fisheries has emphasized assistance to the fishery industry in its problems of production, processing, and marketing. Such aid will continue, looking to the development and maintenance of successful peacetime operations.

Two new offices for the dissemination of daily market information on supplies and shipments of fish and fishery products were opened in 1945, one at San Pedro, Calif., in August and the other at Hampton, Va., in December. The Jacksonville, Fla., office, closed since August, 1943, because of lack of operating funds, was re-opened.

IRA N. GABRIELSON.

FISHERY COORDINATION. Office of. An Office of the U.S. Department of the Interior, created on July 21, 1942, by the designation of the Secretary of the Interior as Fishery Coordinator, for the purpose of developing and assuring sustained production of aquatic food supplies essential to the conduct of the present war, and coordinating the policies, plans, and programs relating to war that affect the fishery industries and aquatic food supplies. The Secretary of Interior was delegated the responsibility for those portions of the war food program concerned with the production and processing of fishery commodities, including the allocation of production materials and facilities.

FLOOD CONTROL. Flood troubles and flood control or preventive measures continue to increase, and seem to pace one another, while the costs mount correspondingly. Practically every State is concerned with flood hazards and protective works. The aggregate cost estimated for works authorized and ready for construction is enormous, but beyond these are the works being planned for the future. Even allowing for the economic aspects of protection of property, public health and safety, and utilization of flood waters, the costs are staggering. Control measures include: (1) flood prevention by holding back excess water; (2) regulation of the flow or escape of these stored waters; and (3) protection against flood damage where excess flows are expected. It is estimated that in any large region the flood damage will be distributed thus: 75 per cent in headwater valleys, 15 per cent in cities, 6 per cent in the main valleys, and 4 per cent on tributaries. Destructive floods in large rivers attract public attention, but there is a vast annual aggregate of damage and death along hundreds of minor streams. Headwater control of main streams is but one factor in the problem.

Predictions of flood occurrences in long and short terms of years are essential in the design of many such works as bridges, dams, water supply and sewerage systems. Much research is devoted to the study of past, present and future conditions as to probable frequency and volume of floods. Forecasting and predicting are based on these studies.

The Federal program for general flood control and protection, under the War Department (Corps of Engineers, U.S. Army) began in 1937, and by June 30, 1945, there were 49 reservoirs and

114 local protection projects in operation. Many other projects, halted by the war, are now to be put under construction. Flood control works ready to be started in the fall of 1945 total \$833,000,000, while others ready by next spring total \$143,000,000. From 1937 to the middle of 1945, Congress appropriated \$605,742,000 for this program. The Flood Control Act, approved in December, 1944, authorized \$750,000,000 for 150 additional projects and continuation of works previously approved. In all, Congress has authorized \$1,680,400,000 for the construction of 650 reservoir and local protection projects. And supplementing all this, Congress has appropriated \$12,000,000 for emergency repairs to levees and other works damaged by the floods of 1944 and 1945. Plans are prepared by the Army engineers and the works are carried out under their direction. Requests for funds for projects are submitted to the Bureau of the Budget, which transmits them to Congress through the President. Work cannot be started until Congress has approved the project and appropriated the necessary funds.

Many projects including dams and reservoirs are of the multi-purpose type; that is, while flood control is the main purpose, the stored water may be utilized for irrigation, power development, municipal or industrial supply or, in rare cases, to assist navigation. During flood periods, the Army engineers have carried out an effective program of protection and rescue work in threatened and inundated areas.

On the Mississippi, levee reinforcement is in progress for some 200 miles, from Alton, Ill., to Cape Girardeau, Mo. Numerous types of paving or revetment are used to protect the slopes of the levees from erosion by waves and currents. To relieve New Orleans from the hazard of approaching high water, the Bonnet Carree floodway or channel above the city was opened, in March, diverting part of the Mississippi flood flow into Lake Pontchartrain. About 160 miles farther north is the Morganza floodway, to divert flood flows to the Atchafalaya valley. Extensive works are planned in the upper Mississippi, between St. Louis and St. Paul, on account of floods in early 1945.

The Ohio River program includes regulation by a series of reservoirs on the tributaries. With these completed, the maximum flood level at Pittsburgh (which averages a flood a year) will be reduced several feet. Since the disastrous Pittsburgh flood of 1936, eight storage dams (out of a program for 14) have been built on the Allegheny, Monongahela, and Beaver rivers. Along the Ohio there are numerous levees and flood walls; also pumping stations to handle interior drainage water. Work has been resumed on such improvements at Paducah, Evansville, Cincinnati, and Portsmouth. This last named place has a concrete flood wall 7,500 ft. long and 20 ft. high.

In Texas, a dam on the Trinity River will form a storage reservoir for the protection of Fort Worth and Dallas, and partial protection for Houston is provided by the recently completed Barker Dam on Buffalo Bayou. In California, a comprehensive program for dams and reservoirs for flood control is being handled by the State in cooperation with local authorities, the Army engineers and the Bureau of Reclamation. On the Illinois River, works for the protection of the East Peoria Drainage and Levee District have been completed. A score of dams on the Tennessee River and its tributaries form multi-purpose reservoirs, the discharge from which is operated as a unit system.

Several States are taking cognizance of the flood control problem. Illinois has a Legislative Flood Control Investigation Commission (1943), which made a progress report in 1945 and was continued to 1947. Indiana, Minnesota and Arkansas have similar organizations. Protective works at Syracuse, N. Y., include a dam and channel improvement on Onondago Creek. Five States in the New England region organized an Interstate Flood Control Commission in October, to cooperate with the Army engineers in completing a \$90,000,000 flood control project for the Connecticut River, on which \$29,000,000 has already been spent.

The new treaty with Mexico, ratified in April, provides for flood control works on the Colorado River and the Rio Grande. To relieve the city of Mexico from flood hazards, orders have been given for expediting work on the Tequiza drainage tunnel, which has been under construction for some years. To repair the damage done in Holland through the breaching of the coastal dikes by the Germans, the Netherlands Government has ordered from the United States a supply of excavators, tractors and other machinery, as well as 200 oil-engine pumping units to drain the flooded areas. See Dams.

E. E. RUSSELL TRATMAN.

FOOD AND DRUG ADMINISTRATION. Wartime enforcement of the Food, Drug, and Cosmetic Act was directed toward the maintenance of normal high standards of purity and truthful labeling, in the face of disrupted conditions that invited relaxation of controls. The Food and Drug Administration's regulatory work is performed through (a) the inspection of factories and warehouses for sanitation and processing controls maintained, and the condition of raw materials, (b) the collection and examination of representative samples of interstate shipments, and (c) the institution of actions in Federal courts when violations are encountered.

The wartime breakdown of normal sanitary controls in food establishments, particularly in storage warehouses, has been a serious aspect of the domestic food situation. Over 71 percent of food seizures in 1945 were based upon charges of filth and decomposition. While some manufacturers were careless about factory sanitation and used unfit raw materials, large quantities of food became contaminated with rodent, insect, and other filth after the food had arrived at its destination in sound condition. Highest in number of seizures were cereal products, including baked goods.

In 1945 the Administration continued to discourage attempts by a minority fringe to debase foods at the expense of consumers. Even after 4 war years, honest merchandise has not been undermined by "ersatz" products. Seizures of foods illegally cheapened with inferior ingredients were numerous, but were confined to a comparatively small group of operators, many of whom have been substantially penalized by the Federal courts. Another type of economic violation receiving concentrated regulatory attention was the shipment of foods below official standards, such as low-fat butter, and inferior grades of canned vegetables and fruits failing to bear the prescribed substandard legend. Since most of the standardized foods were rationed and important in the consumer diet, enforcement of standards was imperative. Every effort was made to return seized items to consumer channels after the goods were reprocessed when possible, as in the case of low-fat butter, or relabeled to correct the violation. Short-weight

and deceptively packaged foods were also seized and distribution was permitted only after the consumer deception had been corrected.

The principal objectives in drug enforcement were the maintenance of the purity and standard composition of medicines and the prevention of misbranding with false and misleading claims or with inadequate directions and warnings. Impurities, such as undissolved particles, in injection drugs, and lack of sterility, in surgical dressings, accounted for a large percentage of the substandard official drugs seized. Increased wartime use of home remedies resulted in a larger number of seizures of products ill-suited for the conditions for which they were sold than at any time since the 1938 Act became effective. Few of the items seized, however, bore claims for cancer, diabetes, tuberculosis, and other serious diseases requiring immediate rational medical treatment. Many were labeled with adroit references to disorders common to war-weary persons and represented an economic rather than a health danger to the purchaser.

Sample pre-testing of every lot of penicillin produced, previously done by the Administration under wartime controls, will continue under the 1945 penicillin amendment to the Act, passed unanimously after recommendation by the Administrator of the Federal Security Agency as essential to public health protection. Changes in drug regulations were issued to effect adequate labeling with directions and warnings on drugs suitable for self-administration.

New-drug applications, permitted to become effective, numbered 132. Estimation of the data accompanying such applications, to demonstrate safety for use and adequacy of manufacturing controls, is becoming more complex as new synthetic chemicals are developed and new uses are proposed for older substances.

Total seizures of foods, drugs, cosmetics, and caustic poisons in the fiscal year 1945 were 3,112. There were 380 criminal prosecutions brought against concerns charged with having made 1,268 violative shipments. The courts were requested to grant 35 injunctions to restrain further violations. Fines totaling \$164,856 were imposed by the courts in 269 criminal cases terminated in 1945. The highest fine was \$18,000, and in 44 cases fines were \$1,000 or more. Jail sentences were imposed upon 26 individuals, of which 13 were suspended and 13 actually served.

PAUL B. DUNBAR.

FOOTBALL. The gridiron game, given impetus by the sudden ending of the war, enjoyed a boom season in 1945, when all-time high attendance records were established in intercollegiate and professional circles. A total of 7,264,147 fans streamed into the stadia of seventy-five leading colleges and universities from coast to coast, making an increase of 1,888,536 over the previous year. The National League shattered all marks in its twenty-six-year-old history, when its ten teams played to 1,918,631 fans. In averaging 28,653 spectators for sixty-eight games professional football left no doubt that it finally has taken its place as a major attraction on the annual sports calendar.

The first postwar season also was notable for the return of many former stars from the service, some of whom joined their former college elevens at once to help the 17-year-olds who had carried on during the years of depleted manpower. Although the brand of play had not yet returned to its standard of 1940 and '41, the campaign held a goodly share of thrilling games.

When the season closed, experts the country over were unanimous in their choice of Army as the team of the year. The West Pointers, with the great Doc Blanchard and Glen Davis running behind a powerful line, truly earned the right to be called one of the outstanding intercollegiate elevens of all time. The Army-Navy contest, for the first time since 1941, returned to its familiar setting in the Philadelphia Municipal Stadium and when the Cadets routed the Middies by a score of 32-13 they completed their second straight campaign undefeated. Blanchard and Davis tallied all five of the touchdowns to give West Point its eighteenth straight triumph and the best record ever compiled by an Army outfit.

Blanchard, winner of just about every individual trophy in the sport, and his fellow All-American proved impossible to stop during the season as Army rolled over nine rivals, including such teams as Michigan, Duke, Notre Dame, and Pennsylvania.

While Army's powerhouse, which never was in danger of defeat, dominated the picture, several other good elevens emerged from the Autumnal scramble. Alabama was ranked second to the Cadets and the Crimson Tide went on to defeat Southern California in the Rose Bowl. Navy, beaten only by Army, but tied by Notre Dame, was rated third nationally.

Indiana, under the tutelage of the popular Alvin (Bo) McMillin, won the Western Conference championship for the first time in forty-six years and for that feat McMillin was acclaimed the season's outstanding coach. Southern California, when it defeated U.C.L.A. by 26-15 before 103,000 fans, clinched the Pacific Coast crown, while Texas won the Southwest title. Other group leaders were Penn, Ivy League; Alabama, Southeastern; Duke, Southern; Missouri, Big Six; Oklahoma Aggies, Missouri Valley; and Denver, Big Seven.

Southern California's record of never having lost in the Rose Bowl was badly marred last Jan. 1 when the Trojans were conquered by Alabama, 34-14, before a crowd of 93,000. The same day, the Oklahoma Aggies routed St. Mary's Gaels, 33-13, before 75,000 in the Sugar Bowl at New Orleans. The East All-Stars rallied to deadlock the West, 7-7, in the twenty-first annual Shrine contest at San Francisco; and Miami tripped Holy Cross, 13-6, on a last-minute pass interception in Miami's Orange Bowl. In other major games on New Year's Day, Georgia downed Tulsa, 20-6, New Mexico topped Denver, 34-24, and Texas beat Missouri, 40-27.

Pro football produced a number of rousing games and unexpected developments, the first surprise coming when the Chicago Bears, long a power in the National League, went toppling to one defeat after another, while the underrated Cleveland Rams skyrocketed to the top. The Rams annexed the championship of the Western Division and the Washington Redskins, after a mad scramble with Philadelphia's Eagles, took Eastern laurels. The play-off for the league title, held in Cleveland's Municipal Stadium in near-zero weather, produced one of the most thrilling contests of all time and ended with the Rams winning, 15-14, for the world pro crown. A new mark for play-off receipts was set when 32,178 fans paid \$164,542 to see the battle. Bob Waterfield of Cleveland was generally acclaimed as the leading pro star of the year.

The closing weeks of the National League campaign saw a bombshell dropped into the ranks of the old club owners when Dan Topping announced that he was joining forces with the newly-created

All-America Conference and that his Brooklyn Tigers, who in 1945 were merged with Boston, would play as the New York Yankees in the new circuit in the Fall of 1946, when the conference is to make its debut.

THOMAS V. HANEY.

FOREIGN AGRICULTURAL RELATIONS, Office of. A branch of the U.S. Department of Agriculture which has been collecting, analyzing, and disseminating information on foreign competition and demand for farm products and agricultural policy. Its primary purpose is to study the factors influencing the food supply and needs of foreign countries, competition, trade barriers, production and marketing, and other developments affecting American agriculture.

At the outbreak of the war, the work of the Office was focused on projects related to the war effort. Among these were the preparation of reports on the food situation and problem in enemy and Allied countries; preparation of handbooks on the agriculture of enemy-occupied countries, for the use of the Allied Military Governments; assistance in the formulation of plans for the relief and rehabilitation of agriculture in liberated areas; and the encouragement of production in the Western Hemisphere of tropical agricultural products formerly imported from the Far East.

Director: L. A. Wheeler.

FOREIGN AND DOMESTIC COMMERCE, Bureau of. A Bureau of the U.S. Department of Commerce, charged with promotion and development of United States commerce. Its operations are (1) of a general economic character, such as reviews of broad trends and developments; (2) of specific, practical application to current business problems. It also serves as the direct liaison between American business interests and the Government. However, activities of the Bureau largely concerned the provision of a quick service of comprehensive reports on commodities and industries at the request of war agencies. The Bureau functions through six divisions—Research and Statistics, Industrial Economy, Small Business, International Economy, Distribution, and Commercial and Economic Information. Director: Amos Taylor.

FOREIGN ECONOMIC ADMINISTRATION (FEA). During 1943 the foreign economic operations of the United States Government were consolidated in a single agency—the Foreign Economic Administration.

Established by Executive Order of September 25, 1943, the FEA represented an actual merger of several previously independent administrative units, whose separate identities were terminated. The consolidated agencies were: the Office (Board) of Economic Warfare (to which an Executive Order of July 15, 1943, transferred the U.S. Commercial Company, the Rubber Development Corporation, the Petroleum Reserves Corporation, the Export-Import Bank, and the foreign economic activities of all other Reconstruction Finance Corporation subsidiaries); the Office of Lend-Lease Administration; the Office of Foreign Relief and Rehabilitation Operations; and the economic operations of the Office of Foreign Economic Coordination.

Functions of the War Food Administration and the Commodity Credit Corporation, with respect to the procurement and development of food and food facilities in foreign countries, were also transferred to FEA by Executive Order of October 6, 1943.

In 1944 and 1945 FEA was given the responsibility for supervising the disposal of surplus property abroad and the procurement of goods in the United States for the United Nations Relief and Rehabilitation Administration, as well as procurement of essential civilian supplies for distribution by our armed forces during the period of military occupation. The FEA also undertook through the U.S. Commercial Company new activities in connection with the facilitation of trade with liberated areas, including purchases abroad of non-strategic materials where private trade was not possible, and domestic purchases of essential consumer goods for such areas.

On September 27, 1945, FEA was terminated by Executive Order and its functions were transferred to other agencies.

To the Department of State were transferred the lend-lease program; participation of the United States in the UNRRA program; activities in liberated areas with respect to supplying their requirements and the procurement of materials in those areas; the collection, analysis, and reporting of economic and commercial information abroad; and the planning of measures for the control of occupied territories.

Transferred to RFC were the U.S. Commercial Company, the Rubber Development Corporation, the Petroleum Reserves Corporation and their functions, capital stock, assets, and liabilities. The functions of the Administration (including those of the U.S. Commercial Company) with respect to the procurement of commodities abroad, excluding those transferred to the Department of Agriculture, also went to RFC.

To the Department of Agriculture was given the functions of the Office of Foreign Food Programs, except license control.

There were transferred to the Department of Commerce all functions of FEA and its agencies with respect to export control; the Technical Industrial Intelligence Committee (under the existing directive of the United States Joint Chiefs of Staff); the facilitation of trade, including functions affecting foreign trade and domestic commerce and the functions of the Clearing Office for Foreign Transactions and Reports; and all other functions not transferred to other agencies, including the final liquidation of the FEA.

The FEA activities transferred to the Department of Commerce have been placed in the newly created Office of International Trade Operations in the Department. Those functions transferred to the State Department are under the jurisdiction of the Liquidation Commissioner.

The FEA operated through two main bureaus, Areas and Supplies, which acted in cooperation with a number of staff offices.

Generally speaking, the Bureau of Areas functioned on a country or area basis. It was responsible for FEA policies relating to those countries and dealt with the State Department on clearance of all programs in the light of United States foreign policy. The Bureau also dealt directly with the representatives of foreign missions in Washington and supervised FEA's foreign missions.

The Bureau of Supplies was responsible for the execution of foreign economic programs on a commodity basis. Within the framework of country or area policies, it regulated the flow of exports, both Lend-Lease and commercial, and executed the foreign procurement and development operations. It was responsible for the related service functions such as warehousing, transporting, and shipping, and represented FEA on committees engaged in

the allocation of United States and world commodity resources.

The largest single task of the FEA was, of course, handling the lend-lease and reverse lend-lease programs. Export control was important throughout the war to insure against too great a drain on domestic supplies of commodities in short supply and to direct exports toward meeting essential needs of our Allies. The preclusive purchasing operations, whereby the U.S. Commercial Company sought to keep vital war materials such as chrome out of the hands of the enemy, ceased as the defeat of Germany drew nearer. Economic warfare studies of bombing objectives, blockade measures, and analyses of the enemy's economic strength shifted to the development of a program for the economic and industrial disarmament of Germany. In the past year, programs for meeting the essential needs of liberated areas and supplying UNRRA's requirements, were greatly expanded, since in many instances, government-to-government operations were the quickest means of supplying these requirements. The FEA procurement of critical and strategic materials abroad continued to be of primary importance to the success of the United Nations war effort until Japan was defeated.

ARTHUR PAUL.

FOREIGN EXCHANGE. The year witnessed a beginning of international monetary reconstruction following the drastic disruption of foreign exchanges and monetary systems produced by World War II. The measures adopted were of two main types. First, several countries took steps to reconstruct their own monetary systems, and to regulate their relations with other countries. Secondly, international cooperation to stabilize currencies and to finance reconstruction was assured by the adoption of the Bretton Woods Agreements. The International Monetary Fund and the International Bank for Reconstruction and Development, set up by these pacts, provided machinery for the solution of future foreign exchange problems through cooperative action.

America's Balance of Payments. The balance of international payments of the United States, by far the world's greatest trading nation, profoundly affects the foreign exchange position of other countries. Despite the huge surplus of exports from the United States over imports into this country, the balance of payments of the United States was unfavorable on a cash basis, with the result that foreign balances held in this country increased and gold was exported.

The United States Department of Commerce summarized the international transactions of the United States in 1945 as shown at top of next column.

Termination of Lend-Lease on August 21, 1945 changed completely the character of the United States balance of payments. Even if large loans are granted by the United States to finance reconstruction abroad, it is probable that this country will gain gold on balance for some time to come, owing to the overwhelming demand that exists for American products.

The Pound Sterling. Great Britain faced a very serious foreign exchange problem with the end of Lend-Lease. She had had to liquidate about half of her foreign investments during the war, while other countries, chiefly India and other members of the Empire, had built up balances in London exceeding \$12,000,000,000, which were blocked by exchange restrictions. In order to permit a large volume of foreign trade to go on

INTERNATIONAL TRANSACTIONS IN 1945

(millions of dollars)

We bought or otherwise acquired from foreign countries goods and services valued at	8,781
Of this amount, a portion was received under reverse Lend-Lease or other conditions not requiring payment.....	1,876
So we paid to foreign countries.....	6,855
Foreign countries bought or otherwise acquired goods and services from us amounting to.....	12,917
This figure, too, includes items not requiring payment, such as lend-lease and contributions to UNRRA, amounting to.....	6,139
Thus, of the dollars we supplied to foreign countries they used.....	6,778
As a result of transactions in goods and services, foreign countries had left.....	77
In addition, Government credits to our Allies for relief and related purposes, together with other long-term capital movements, supplied dollars to foreign countries amounting to.....	1,778
Net payments to foreign countries not otherwise accounted for.....	136
Hence, foreign countries were able to increase net dollar balances and purchase gold from the United States to the amount of.....	1,991

despite exchange controls, Great Britain had made herself the center of a sterling area within which transfers of funds from country to country could be effected almost freely, while transactions with outside countries were rigidly limited. Dollars received by sterling area countries were pooled and allocated by London among the members of the sterling area in the light of its over-all needs.

While Great Britain is scheduled to end foreign exchange controls and radically modify the operation of the sterling area under the Bretton Woods Agreements, these objectives are to be achieved only gradually and with the help of a huge dollar credit negotiated late in the year by a mission to Washington headed by Lord Keynes. In the interim, to permit immediate business dealings with other European countries, an agreement with Sweden was concluded on March 6, 1945, with France on March 27, and with Turkey, Denmark and Holland later in the year. Each of these agreements established a fixed rate of exchange between the pound sterling and these other currencies. The Swedish agreement, for example, provided that the Bank of England would make available Swedish kroner to British residents making payments to Sweden, while the Riksbank would provide pounds sterling in Sweden for similar purposes. In certain of these agreements, it was specified that each central bank would provide currency of the other up to a fixed amount only. These agreements contained a clause stating that each country would not change its currency parity without consultation with the other.

The Anglo-American Financial Agreement, made public December 6, granted Great Britain a line of credit of \$3,750,000,000, repayable in 50 annual installments starting December 31, 1951, with interest at 2 per cent. A feature of the credit was the provision that if the British balance of payments would not provide sufficient foreign exchange to pay interest, it was to be waived. In addition, Great Britain agreed to pay to the United States \$650,000,000 on similar terms in final settlement of Lend-Lease and for surplus American property and installations left in Britain by the American armed forces. As part of the Agreement, Great Britain agreed "to relax import and exchange controls, including exchange arrangements affecting the sterling area," and to cooperate with the United States in fostering freer trade. As an immediate sequel to the Agreement, Britain ratified the Bretton Woods pact.

Other Foreign Exchanges. France announced the devaluation of the franc on December 24, as a preparatory step for her adherence to the Bretton Woods Agreements. The rate of exchange was fixed at 119.0669 francs to the dollar, or approximately 85 cents per 100 francs. This compared with a rate of 50 francs to the dollar put into effect during the war. Following this devaluation, France was expected to join the trend towards multilateralism in foreign trade, and to move away from the policy of self-sufficiency and rigid controls advocated by the Communist Party.

Monetary inflation became increasingly pronounced in several countries in Southern and Eastern Europe. Britain negotiated a new credit to stabilize the Greek drachma, which was granted shortly after the end of the year. The Polish zloty, with a nominal value of 20 cents, was reported sold at 600 zloties per dollar in Stettin. The Yugoslav dinar, with an official rate of 2 cents, reportedly was traded at 250 or more to the dollar in the open market in that country. In some countries of Southern and Eastern Europe, there was hesitation to use the local currency as a medium of exchange in business transactions, owing to fears that drastic devaluations would be necessary, and barter flourished.

Latin American countries added further to their gold and foreign exchange holdings as exports continued favorable, while imports were limited by inability to purchase many desired products abroad.

The New York foreign exchange market had not resumed quotations for most European currencies by the end of the year. Quotations in December for all foreign exchanges quoted compared with those of the year before, or the date when trading was resumed, as follows:

FOREIGN EXCHANGE RATES

(Average of noon buying rates in New York for cable transfers—
in cents per unit of foreign currency)

	1944	1945
Argentina (peso)		
Official	29.773	29.773
Special export	25.125	25.125
Australia (pound)		
Free *	321.50	321.41
Belgium (franc) ^b	2.2883	2.2839
Brazil (cruzeiro)		
Official	6.0594	6.0602
Free	5.1469	5.1802
British India (rupee)	30.122	30.122
Canada (dollar)		
Official	90.909	90.909
Free	89.853	90.725
Colombia (peso)	57.272	56.980
France (franc) *	2.0189	1.7822
Mexico (peso)	20.581	20.579
New Zealand (pound)	324.42	322.70
South Africa (pound)	398.00	400.50
United Kingdom (pound)		
Free *	402.95	403.37
Uruguay (peso)		
Controlled	65.830	65.380
Non-controlled	53.506	56.290

* Trading resumed July, 1945. ^b Trading resumed September, 1945. * Trading resumed August, 1945.

International Cooperation. The Bretton Woods Agreements Act, approving American participation in the International Monetary Fund and the International Bank for Reconstruction and Development, was approved by large majorities in Congress and went into effect July 31, 1945. The enabling Act set up a National Advisory Council on International Monetary and Financial Problems, headed by the Secretary of the Treasury, and comprising the Secretaries of State and Commerce, the Chairman of the Board of Governors of the Federal Reserve System and the Chairman of the Board of Trustees of the Export-Import Bank.

The Bretton Woods pacts provided that the signatories were to ratify their adherence by December 31. Ceremonies were held in Washington bringing the two international institutions into formal existence on December 28, and by December 31 ratifications had been received from thirty-six of the forty-five governments which had drafted the Agreements at the 1944 conference at Bretton Woods, New Hampshire. Russia and Australia were the chief countries that had not ratified at that time, although they could apply for admission at any time thereafter and be accepted by the governing boards of the International Fund and Bank.

Whenever the International Monetary Fund is ready to begin exchange transactions, members must communicate within thirty days the par value of their currencies. The par value must be based upon rates of exchange prevailing on the sixtieth day before the Agreements went into effect, except for countries whose metropolitan territory was occupied by the enemy during the war.

JULES I. BOGEN.

FOREIGN FUNDS CONTROL. A division of the U.S. Department of the Treasury, established in 1940, which is responsible for carrying out the economic and financial warfare programs of the Department under the Trading with the Enemy Act, as amended. In addition, the Control has been assigned responsibility for carrying out certain functions of the Treasury Department in areas liberated by the armed forces of the United Nations. Controls over finance, property, and foreign exchange similar to those in the United States were applied in liberated areas in order to maintain firm bases for military operations and to insure the full economic support of the areas against the enemy. Acting Director in 1945: Orvis A. Schmidt.

FOREIGN LIQUIDATION COMMISSIONER, Office of. Originally the Army-Navy Liquidation Board created by the Secretaries of War and Navy with the approval of the Surplus Property Board on Feb. 20, 1945, the Office of the Foreign Liquidation Commissioner, with Thomas T. McCabe as Commissioner, assumed its new name and was transferred by Executive Order to the Department of State on Oct. 20, 1945.

The Office controls and disposes of surplus military supplies overseas, excluding merchant ships sold by the Maritime Commission.

The Commissioner, as Special Assistant to the Secretary of State, heads the main office in Washington, D.C., and controls the activities of the field offices located in London, Paris, Rome, Cairo, New Delhi, Shanghai, Manila, Melbourne, Guam, New Caledonia, Ottawa, Canal Zone, and Rio de Janeiro.

After surplus property has been so declared by the owning agency, it passes to the jurisdiction of the liquidation commission for disposal. Maintenance until sale is the responsibility of the Army, Navy or other owning agency.

For administrative and disposal purposes, all surplus property is classified into consumer goods, scrap, raw materials, movable goods, real property, aircraft and combat material. Except for aircraft, which is sold through both headquarters and field offices, all sales are negotiated solely through the commissioner in each field area. Sales are correlated at the Washington headquarters which formulates policies and coordinates global sales activities. Foreign currency may be used through special arrangement with the field commissioner.

Priority is granted to purchasers as follows:

1. United States Government agencies abroad. (UNRRA has been the largest customer.)
2. Non-profit institutions.
3. American firms, for their trade-marked surplus, to be sold abroad.
4. Foreign governments anywhere, for their reconstruction and rehabilitation.
5. Foreign governments where surplus is located.
6. All others.

As of January 31, 1946, total sales amounted to \$135,000,000, additional contracts totaling \$171,000,000 had been executed.

The Commissioner anticipates that surplus material overseas will eventually total the 4,000,000 items it took to win the war.

The functions of the former Foreign Economic Administration pertaining to lend-lease affairs and United States participation in the operations of UNRRA were transferred on October 20, 1945 to the Office of the Foreign Liquidation Commissioner.

THOMAS B. McCABE.

FOREIGN-TRADE ZONES BOARD. A Board created under the Department of Commerce in 1934 to provide for the establishment, operation, and maintenance of foreign-trade zones in ports of entry of the United States. The Chairman is the Secretary of Commerce. Applications were under consideration during 1945 for the establishment of zones at New Orleans, Houston, San Francisco, and San Juan, Puerto Rico.

FOREST SERVICE, U.S. Many of the emergency activities in which the U.S. Forest Service was engaged during the war were brought to a close with the cessation of hostilities. The Timber Production War Project, started in 1943 to facilitate increased production of lumber, pulpwood, and other timber products urgently needed for war uses, was terminated after having stimulated production of more than 8 billion board feet of forest products in states east of the Great Plains. Approximately 25,000 prisoners of war were trained for woods work by project foresters during the two years the project operated.

The Forest Service also closed down operation of its Alaska Spruce Log Program, begun in 1943 to help meet a pressing war need for spruce lumber for aircraft construction. During the life of the project, 38 million feet of high-grade spruce logs were cut from the Tongass National Forest in Alaska and rafted 900 miles to Puget Sound mills. In addition, approximately 46 million feet of lower-grade material was supplied to Alaska sawmills for the construction needs of the armed forces in the Territory.

The Emergency Rubber Project was expected to be liquidated by June, 1946. This project was authorized by Congress in 1942 to provide a domestic source of natural rubber when foreign sources were cut off by Japanese aggression. The Forest Service was assigned the task of developing a seed supply, growing the nursery stock, and planting several thousand acres of guayule, a native Mexican rubber-bearing shrub. During 1945, harvesting and processing of shrub from some of the 31,356 acres of guayule plantations established under the project was carried on. Two processing mills, at Salinas and Bakersfield, California, were in operation. Plans for the construction of four additional rubber mills, to be operated under contract by the Firestone Tire and Rubber Company, were cancelled when the war ended. Some 20 million nursery seedlings were sold to a Mexican

rubber company, which has started a guayule planting program expected to reach 15,000 to 20,000 acres. Results of Forest Service experience with guayule planting and milling techniques were made available to the Mexican Government. A sale of approximately 20,000 pounds of guayule seed was made to Argentina.

To bring its information up to date, the Forest Service in 1945 began a re-appraisal of the forest situation in the United States. The re-appraisal project called for a review of existing data, on-the-ground checks, and careful analyses to determine the amount of timber now standing in the forests, the current rates of growth and drain, the condition of forest lands, and how they are being managed. Completion of the study was not expected before 1946.

Postwar Program. Plans for needed work for the postwar development of the national forest system were prepared by the Forest Service. Normal maintenance work had been largely suspended during the war, and many forest roads and other facilities were in run-down condition. New work planned included building additional forest highways; gaining access to undeveloped areas through construction of forest roads and trails; expansion of facilities for fire protection; tree planting; thinning, pruning and improvement work in young timber stands; range improvement; upstream work on watersheds to reduce floods; and recreational improvements. Planned work, including cooperative work on state and community forest lands, called for an expenditure of about \$2,215,000,000 over a 6-year period. How rapidly such work will progress depends, however, upon appropriations of funds by Congress.

Not only in the national and State forests but on private forest lands over large areas, restoration and improvement work was needed, the Forest Service reported. In World War I, some 6 billion board feet of lumber was used for war purposes in 18 months. World War II required this amount every four months for 3½ years. The annual drain on the country's forests was substantially in excess of annual growth. The Chief of the Forest Service in his annual report for 1945 stated that too much forest land is still being stripped of its timber and left incapable of further production for years to come. The United States, he said, cannot continue to eat into its forest capital and reduce the productive capacity of its forest land without serious consequences. In order that the supply of wood may be continued from year to year without interruption, a growing stock of timber must be built up and maintained so that the volume cut is constantly being replaced by an equivalent volume reaching merchantable size, in places where it can be utilized economically. He estimated that the forests of the United States, if brought up to full productivity, could furnish permanent employment for some 2,500,000 workers in addition to the 3,750,000 now supported by forest industries and activities.

Forest Products Research. Recent technological advances in wood utilization point to an increasing demand for wood. The Forest Products Laboratory, maintained by the Forest Service at Madison, Wisconsin, accomplished some striking results in increasing the value and usefulness of wood products during the war years. Laminated wood, improved plywoods, and wood and paper base plastics are finding a widening variety of uses. Such laboratory products as "impreg," "compreg," "papreg," "staypak" and the "uralloys" are being adapted to industrial usage. The Laboratory has developed

the technical information upon which can be based an industry for the production of industrial alcohol from wood on a scale sufficient to meet any conceivable demands.

Among the new developments announced by the Forest Products Laboratory was a process by which alpha cellulose can be produced from wood in greater quantity per unit of raw wood and in purer form than was possible by existing pulping methods. The process makes possible the use of wood cellulose for such special products as sausage casings and rayon for truck tires. Chemically, the product is similar to cotton linters alpha cellulose. The process yields, on a commercially feasible basis, 48 to 50 percent of high-grade alpha cellulose from semi-chemical wood pulp, as compared with yields of about 38 percent from present pulping processes. The purity of the product and the approximately 25 per cent increase in yield enhance its commercial possibilities.

Another Forest Products Laboratory development was a superior glued, laminated wood product, with joints that endure the ravages of fresh or salt water, weather, and severe conditions of heat and moisture. It was produced by the use of special synthetic resin adhesives and a curing technique developed by the Laboratory. This process was developed when the Navy's shipbuilding requirements for large-size, high-grade, solid timbers could not be met by lumber producers. With the new process it is possible to produce laminated timbers and other wood products suitable for most uses to which solid wood can be put, including structural timbers, arches, ready-shaped members, implement and tool parts, and prefabricated building parts. Gluing permits the fabrication of large members from material of small size. The use of dry lumber reduces seasoning defects incident to the drying of large green timbers. Likewise, material defects, which reduce the usefulness of solid wood products, can be eliminated in the laminated product.

"Wood sandwich" constructions (soft, lightweight core material with thin, high-strength facings) were adapted by the Laboratory for use by the armed forces as skins for wings and fuselages in the development of new high-speed aircraft. Wartime conditions restricted the use of sandwich constructions to aircraft, but they have broad peacetime uses in products requiring combinations of high rigidity, light weight, and sound or heat insulation. Potential uses include wall panels, flooring, refrigerator cars, boats, automobile bodies, doors, and special shipping containers.

By developing and adapting pulp-making processes to hitherto little-used wood species and wood wastes of lumber camps, sawmills, and veneer mills, the Forest Products Laboratory helped paper manufacturers overcome shortages in raw materials, labor, and transportation facilities during the war. Hardwood "weed" species were shown to provide substantial reserves of pulpwood, in many instances relatively close to mills accustomed to obtaining supplies from distant areas, thereby reducing the heavy burden on railroads and trucking lines. Laboratory research demonstrates that these little-used hardwoods could yield profitable quantities of pulp for newsprint, book and magazine papers, wrapping paper, and other products. This should help to broaden the base of pulpwood supply by promoting utilization of neglected species which have come to predominate in many cut-over areas from which preferred species have been removed.

It is estimated that two-thirds or more of the

wood volume in the average tree is wasted. Millions of tons of wood in the form of tree tops, broken trunks, cull logs, and inferior species are left in the forest because it costs more to collect it and move it to market than it can be sold for. Improved techniques that will reduce the cost of logging, assembling and transporting the material, and that will bring neglected species into use, will help to bring this potential supply of raw material into commercial use. The development of diversified manufacture, so that the waste or by-product of one plant will become the raw material of another, also will make for more complete utilization of the forest crop and thus help in some measure to close the gap between annual timber growth and drain.

To encourage such developments, the Forest Service in 1945 established two regional units, each consisting of a small corps of technical experts in forest products utilization. These men were assigned to bring research findings to industry, assist in commercial application of new discoveries, transmit to the Forest Products Laboratory problems that required special investigation or advice, and otherwise work to promote improved forest utilization. Five additional regional forest utilization units were planned in 1946.

World Forestry. A report to the governments of the United Nations in 1945 by a technical committee on forestry called attention to the fact that in the face of rapidly multiplying uses for wood and ever-mounting wood needs, the world's forest resources are steadily diminishing. The technical committee was set up in 1944 by the United Nations Interim Commission on Food and Agriculture, with Dr. Henry S. Graves, dean emeritus of the Yale University School of Forestry, as chairman. Its membership included representatives of nine nations. American members were: Lyle F. Watts, Chief of the U. S. Forest Service; Walter C. Lowdermilk, Assistant Chief of the Soil Conservation Service; and Tom Gill, Secretary of the Charles Lathrop Pack Forestry Foundation.

The report said that less than 15 percent of the world's timberlands are being handled as a renewable, continuously productive resource. Two-thirds receive neither care nor protection.

The report recommended establishment under the United Nations organization of a permanent international forestry agency for the collection and unification of forestry information and to aid member nations in the solution of their forest problems. Most important of the specific problems cited for special attention were: (1) Restoration of Europe's war-depleted forests; (2) extension of sound management in countries whose reserves of old timber are in process of depletion; (3) reforestation in southeastern Asia and the Middle East as an indispensable step in soil improvement, more efficient agriculture, and higher nutritional levels; (4) initiation of forestry measures in the largely unexploited wood surplus countries, such as the Latin Americas and Equatorial Africa; (5) effective world-wide distribution of forest products; (6) world-wide correlation of the results of research in forest management and wood utilization; (7) coordination of forest production and utilization with soil and water conservation as well as with other land uses and services, such as wildlife and grazing.

Fortieth Anniversary. The U. S. Forest Service observed its fortieth anniversary in 1945. It was established in 1905 when the earlier Bureau of Forestry was reorganized and the forest reserves (later re-named national forests) that had been

set aside from the unreserved public domain were placed under its jurisdiction. Governmental forest work actually began in the Department of Agriculture in 1876, with the appointment of a commissioner to study forest conditions in the United States. In 1881 a Division of Forestry was set up, and in 1901 this became the Bureau of Forestry. Through these earlier periods, however, the government's forest work amounted to little more than compilation of information and statistics.

In the past 40 years the Forest Service has been the spearhead of the whole conservation movement in America. It has developed sound forestry techniques applicable to American conditions, and the national forests under its administration have become the world's outstanding public forest system. At an anniversary meeting of members of the Service, however, Chief Forester Watts said that the biggest jobs lie ahead. The downward trend of the nation's forest resources, he said, has yet to be reversed. The bulk of the country's forest lands are still handled with little regard for future productivity. Large areas of depleted land need to be restored to usefulness. He pledged the Forest Service to renewed effort in a program of forest improvement and development that would make the forests play their full part in serving the welfare of the nation and its people.

LYLE F. WATTS.

FORMOSA (Taiwan). An island near the southeast coast of China. It was under Japanese control from 1895, when it was ceded by the Chinese to the Japanese, until V-J Day in September, 1945, after which the Chinese resumed the administration of the island. Total area, including the Pescadores: 13,889 square miles. Total population (Dec. 31, 1940): 6,077,478 (91.5 percent Formosan Chinese, 6 percent Japanese, and 2.5 percent aborigines). Chief towns (1935 census): Taihoku (capital), 278,446; Tainan, 111,959; Keelung, 84,978; Takao, 83,735.

Production, etc. The principal agricultural products are: rice, sugar, tea, sweet potatoes, ramie, jute, and turmeric. Camphor is obtained from the forests. Livestock (1937): 1,849,195 pigs, 282,101 buffaloes, 76,341 cattle, 70,384 goats. Minerals produced include gold, silver, copper, coal, and oil. Foreign trade (1939): imports Y408,649,840; exports Y592,938,199 (yen averaged \$0.2596 for 1939; \$0.2344, 1940). Budget (1940-41): Y269,457,562.

FOUNDATIONS. Few structures requiring deep or difficult foundations are undertaken in wartime, since such works involve considerable time and cost. Deep and submerged foundations present the most serious difficulties, and the proposed Mississippi River highway bridge at New Orleans will require deep foundations in soft alluvial soil. Shallow foundations also may offer problems, as illustrated at a housing project on soft ground where settlement of the buildings had to be considered. The solution was to excavate to basement level for each building (35 x 50 ft.) and then, in each basement, to drive 14 holes, 4-in. in diameter, to depths of 20 to 30 ft. The holes were then grouted with cement to consolidate the soil and support the footings.

Earthquake shocks and tremors have to be considered in some localities, as at the Kentucky Dam of the Tennessee River. A multi-story U.S. Army hospital in Hawaii has some footings on rock at shallow depths and others on concrete piers sunk to rock at considerable depths. All are

reinforced by steel H piles and are tied together by a system of concrete beams.

For the new Pecos River bridge of the Southern Pacific Ry., in Texas, with earthquake forces a factor in the design, the tall concrete piers, 275 ft. high, are made hollow as a means of reducing horizontal movements. Somewhat similar conditions exist at the new Colorado River bridge of the Santa Fe Ry. at Topock, Arizona. Here the pneumatic caissons of one concrete pier had to be sunk to the exceptional depth of 123 ft. below water level to reach a firm stratum. This required special working conditions, with 52-lb. air pressure in the caisson, so that the men worked in shifts of only 30 minutes. With the caisson in place, the solidity of the rock was tested by drilling holes to depths of 20 to 25 ft. below the caisson.

The new Montgomery Dam on the Ohio River, 32 miles below Pittsburgh, is founded on a row of open steel caissons (not requiring pneumatic pressure) which were filled with concrete after being landed on rock. For the foundation of the 145-ft. Rincon del Bonete Dam, in Uruguay, the seamy rock was consolidated by drilling and grouting. This was done in successive steps of 13 ft., each step being left to set or harden before drilling and grouting the next step. A Pacific coast dry-dock of the U.S. Navy, with its concrete walls in 30 ft. of water and 60 ft. of soft soil, is founded on rock-filled trenches in which sand-piles were formed by jetting holes and filling them with sand pumped in through the jet pipe. For a Navy pier in the same locality, but founded on firm sand and gravel, some 2,400 concrete piles were driven 20 ft. into the soil. These piles were 18 in. square and 50 to 80 ft. long, each with a pipe in the center for jetting water through the point to facilitate the driving.

Interesting work has been done in prospecting the foundation conditions for proposed structures. Study of the rock bed of the Columbia River for a dam below The Dalles, Oregon, has been made by divers under difficulties, the water being 200 ft. deep and flowing with so swift a current as to require the use of anchored cables to prevent the men from being swept downstream. Seismic methods of prospecting have been used in locating a rock bed for a dam at Hemlock Lake, to increase the water supply of Rochester, N. Y. Dynamite charges are exploded in drilled holes at specific depths and the vibrations are recorded by delicate instruments in a mobile or truck-mounted seismic laboratory, said to be the only one in existence. These records indicate the character of the soil through which the vibrations pass. See BRIDGES, BUILDINGS, DAMS, FLOOD CONTROL.

E. E. RUSSELL TRATMAN.

FRANCE. A republic in western Europe. Area: 212,659 square miles. The estimated population (July, 1945) was 39,677,000, compared with (1936 census) 41,907,056. Vital statistics (exclusive of Alsace-Lorraine and Corsica) for 1943 (rate per 1,000): births 15.9, deaths 16.4; infant mortality 75 (deaths under one year per 1,000 live births).

Chief cities (with 1936 census figures): Paris (capital) 2,829,746, Marseille 914,232, Lyon 570,622, Bordeaux 258,348, Nice 241,916, Toulouse 213,220, Lille 200,575, Nantes 195,185, Strasbourg 193,119, Saint-Etienne 190,236, Le Havre 164,083, Toulon 150,310, Rouen 122,832, Nancy 121,310, Reims 116,687, Roubaix 107,105, Clermont-Ferrand 101,128.

Education and Religion. No recent statistics on education are available. The French Government

in 1945 announced various educational reforms. Among them were the creation of the National School of Government Service to replace the Free School of Political Science and the establishment of a new first grade in secondary schools. Roman Catholicism is the religious faith of most of the people; there were about a million Protestants.

Production. In prewar times 38 percent of the population was engaged in agriculture, 31 percent in industry, and 11.5 percent in commerce. Land used for agricultural purposes in 1938 was equal to 62 percent of the total area. Exclusive of Alsace-Lorraine the yields of the main field crops during 1944 (in metric tons) were: wheat 6,460,000, potatoes 6,600,000 (1943), sugar beets 6,000,000 (1943-44). Other major branches of agriculture are livestock raising, dairying, vineyards, and fruit cultivation. In 1944 the output of wine totaled 1,028,818,000 U.S. gallons. Livestock (1945 est.) 14,800,000 cattle, 6,900,000 sheep, 5,900,000 pigs, and 2,300,000 horses. Meat output (1945 est.): 1,000,000 tons.

Mineral and metallurgical output in 1944 (exclusive of Alsace-Lorraine) was as follows (in metric tons): coal 25,260,000, pig iron and ferroalloys 1,104,000, steel 1,272,000, aluminum 26,400. In October 1945 the output of coal totaled 3,756,000 tons. The production of electricity (exclusive of Alsace-Lorraine) in 1944 totaled 13,608 million kwh. Based on the prewar value of output, the leading manufacturing industries were metal working, machinery, and metal products; food; chemicals; textiles; metallurgy; embankment work and stone construction; wood; rubber; paper, and cardboard; leather and hides.

Defense. Plans for the reorganization of the French armed forces call for a minimum of 65,000 men in the navy and 500,000 men in the army. According to a statement released (Dec. 28, 1945) by the French Ministry of Information, Gen. Jean de Tassigny has asked for 105,000 men to be stationed in France, 100,000 in North Africa, 120,000 in the Far East and the colonies, 120,000 troops for the occupation of Germany, and 55,000 military police. Men will be called for compulsory military service at the age of 19 and will serve for a period of 13 to 14 months.

Foreign Trade. As a result of the occupation of France by German armed forces during World War II, not many products were available for export in 1945. In the twelve months of 1945 the value of imports was 54,839,766,000 francs; exports, 11,396,858,000 francs. For the year 1944 imports were valued at 7,740,000,000 francs; exports, 23,964,000,000 francs. The principal imports into France for consumption included wheat, corn, rice, vegetables, fruits and nuts, sugar, wines, hides and skins, cotton, wool, wood and cork, wood pulp, rubber, coal, petroleum, copper, machinery, oil-seeds, and chemical dyes. In prewar years the chief export products included wine, brandy and liqueurs, hides and skins, wool, cotton fabrics, rayon and silk fabrics, paper and cardboard, iron ore, iron and steel, metal manufactures, machinery, automobiles, vegetable oils, chemical dyes, and perfumery.

In 1938, exclusive of French territories and possessions, the principal suppliers and markets (by value of products) were Belgium, Great Britain, the United States, and Germany. See *Statistical Year-Book of the League of Nations*, 1942/44 (Geneva: 1945), page 191, for yearly totals of imports and exports during World War II.

Finance. France's budget for 1946, according to estimates submitted to the finance commission of

the Assembly on Dec. 6, 1945, will total 464 billion francs, including 200 billion for civil expenditure, 59 billion for liquidation of the war, 125 billion for military costs, and 80 billion for reconstruction. Budget (1945): revenue 172 billion francs; expenditure 384.3 billion francs. In 1944 revenue totaled 123.46 billion francs; expenditure 364.56 billion francs, including German occupation charges amounting to 198.7 billion francs. The internal public debt of France increased from 445.7 billion francs on Aug. 31, 1939, to 1,734.6 billion francs on Apr. 30, 1945.

Currency notes in circulation rose from 151.3 billion francs on Dec. 31, 1939, to 496.3 billion francs on Sept. 30, 1945. Notes of the Bank of France had to be presented for exchange against new notes between June 4 and 15, 1945. After that date old notes ceased to be legal tender.

The official exchange rates for the franc in 1945 (until December 27) were: 49.53 francs equal U.S.\$1; 200 francs equal £1 sterling. On Dec. 27, 1945, by a vote of 506 to 44, the National Constituent Assembly adopted a law for the devaluation of the franc, as follows: The French (metropolitan) franc was pegged at 119.10669 francs = U.S.\$1 and 480 francs = £1 sterling. With regard to overseas territories the government decided to modify the value of currency in certain colonies with relation to the French (metropolitan) franc. As a result of these decisions, the "franc zone" will include three sectors in overseas territories:

(1) The currency of Algeria, French Guiana, French West Indies, Morocco, and Tunisia will remain at par with the French franc and have the same foreign exchange value.

(2) French Cameroun, French Equatorial Africa, French Togo, French Somaliland, French West Africa, Madagascar, Réunion, and St. Pierre and Miquelon will be able to exchange 100 of their own francs against 170 French francs. Their franc will have an exchange value of 70.06 francs = U.S.\$1 and 282.35 francs = £1 sterling.

(3) New Caledonia, New Hebrides, and French territories in Oceania will follow French colonies in the Pacific where the local franc is and will continue to be valued at 100 francs to 240 French francs. The U.S.\$1 and £1 sterling were fixed at 49.627 francs and 200 francs, respectively.

Currency in the "franc zone" which is known under a name other than franc will have the following exchange values in French francs: 1 Indo-chinese piaster = 17 French francs; 7.006 piasters = U.S.\$1; 28.235 piasters = £1 sterling. The French rupee was valued at 36 French francs but retains the old exchange value to the U.S.\$1 and £1 sterling. The Syrian-Lebanese £ was valued at 54.35 francs but has the same parity as before with foreign currency.

The Bank of France and four large deposit banks (Crédit Lyonnais, Société Générale, Comptoir National d'Escompte, and Crédit Industriel et Commercial) were transferred to state control on Jan. 1, 1946. Local and regional banks were not subject to nationalization, nor were commercial banks engaged primarily in foreign operations.

Transportation. The highway network of France extends for a total of 2,072,027 miles, made up of 49,821 miles of national roads controlled by the state, 155,831 miles of departmental roads administered by the departments, and 1,866,375 miles of local roads maintained by the communes. The main railway lines in France are operated by an autonomous government corporation organized through the amalgamation in 1938 of two systems owned by the government and four by private

interests representing a total of 39,176 miles of operated trackage, mainly of standard gage. In addition there are a number of small private railroads. On Jan. 1, 1945, only 7,343 steam and 582 electric locomotives, 172,048 freight cars, and 9,000 passenger cars were in immediate working condition. French airlines operate networks in metropolitan France, and to North Africa, West Africa, the Near East, Madagascar, and other points in the world. There are 7,400 miles of navigable inland waterways, for the transportation of heavy bulk commodities. About 50 million metric tons were loaded each year on inland waterways during prewar years.

Events, 1945. For France the year 1945 was an interim between liberation and the establishment of the Fourth Republic. The *entre-acte* was a tragic comedy of peace, offering a surcease from sudden death but no promise of abundant life; of lost glory, always eluding eager pursuers; of inflation and hunger, which were constant companions of *les misérables*; of frustration in diplomacy, born of the marriage of national impotence and vaunting ambition to restore *La Grande Nation* to the rank of a Great Power; and of realignments and fresh beginnings in domestic politics, looking toward a new day.

The Grandeur of Victory. On New Year's Day, 1945, Ambassador Henri Bonnet signed the United Nations Declaration in a ceremony at the State Department. Roosevelt's message declared: "France was the first ally of our country in our own war of liberation. . . . And now France stands beside us as a strong ally—once more in the first rank of the free and peace-loving nations of the world." French enthusiasm at formal membership in the Allied coalition was dampened a fortnight later by the imposition of stringent restrictions on train service and public utilities due to the coal shortage. De Gaulle attributed the new austerity to the "rash conceptions" of Anglo-American leaders regarding German capacity for resistance. The General-President's appeals for national greatness through sacrifice evoked a popular echo, since they reflected the hurt pride of an embittered people. "We must make an enormous effort," asserted De Gaulle on February 5, "to raise ourselves to the rank where we wish to be. For the moment the demands, the tests, and the ruins of war are limiting us to the most pressing needs—that is, simply to make every effort to stay alive. But, as the sun of victory rises on the horizon, the nation is discovering the future . . ."

The French contribution to V-E Day was dependent upon American aid. After protracted negotiations Jean Monnet returned to Paris in February with drafts of lend-lease accords which the Cabinet approved. On February 28 the pacts were signed in Washington. Apart from armaments, the agreements made provisions for the transfer of \$1,675,000,000 worth of civilian supplies and \$900,000,000 worth of locomotives, railway cars, ships, and machinery, with deliveries to continue after the end of hostilities and to be paid for by the French government in installments at 2% interest. Reverse Lend-Lease materials supplied by France to American forces during the year following the Normandy landings were estimated to have a value of \$400,000,000. The French role in the closing campaigns of the war, while not decisive, was by no means insignificant. Paris was consulted regarding the armistice terms and participated in the ceremonies of signature in Reims and Berlin, May 7-8, 1945. De Gaulle's broadcast declared: "This is victory. It is the victory of the United Na-

tions and of France. . . . While the rays of glory once again lend brilliance to our flags, the country turns its thoughts and affections first of all toward those who died for her and then toward those who in her service struggled and suffered so much. . . . Honor to the United Nations, which mingled their blood, their sorrows and their hopes with ours and who today are triumphant with us. *Vive la France!*"

The Misery of Victory. The rebirth of France, after catastrophe and enslavement, was made possible by the armed might of Britain, America, and Russia. The nation was physically and spiritually impoverished by its ordeal. It emerged dazed, as from a nightmare, into a dull dawn of penury and doubt. These circumstances explain the wounded vanity, the morbid sensitivity and the peevish obstinacy which so often found expression throughout the year in the words and acts of French leaders in grappling with their problems at home and abroad. While still in the midst of war, French politicians, patriots, and pressmen felt hurt that De Gaulle was not invited to join Stalin, Churchill, and Roosevelt at Yalta. Through Tass, Moscow took pains to deny an AP report of mid-January that Stalin and De Gaulle had struck a bargain in December by which the U.S.S.R. would urge Britain and the United States to include the French leader in the meetings in return for French support of Soviet aspirations in Eastern Europe. As the Crimea Conference ended, Maurice Schumann opined in *L'Aube* that fear of social change had "distorted the judgment and retarded the choice of the ruling classes of the United States and the British Empire."

The Anglo-American-Soviet invitation to Paris to participate in the San Francisco Conference, in plans for liberated Europe, and in the military occupation of Germany were resented rather than welcomed because of French exclusion from the original decisions and the alleged paucity of information supplied regarding them. De Gaulle declined Roosevelt's invitation to visit him in Algiers in mid-February. *L'Aurore* commented: "Not too much coquetry! . . . Bad humor is not a sign of strength!" Roosevelt's death two months later produced remorse and new criticisms of De Gaulle's attitude. Another manifestation of pique was French refusal to join Washington, London, Moscow, and Chungking as inviting powers in sponsoring the San Francisco Conference. The reason given, and later incorporated in French reservations and amendments—i.e. lack of assurance that the French-Soviet alliance would remain intact under the Charter—proved to be baseless and was repudiated by the Soviet press. The French delegation at San Francisco was headed by Foreign Minister Bidault and included René Pleven, François Billoux, Henri Bonnet, and Joseph Paul-Boncour.

The quest for recovery from the ravages of war, like the quest for Great Power status, was only half successful. Large scale devastation was limited to Normandy. Nazi terrorism, however, had been wide-spread throughout France. A 13-volume report by the Psychological Warfare Section of SHAEF, released on May 3, revealed scores of mass executions by enemy forces and thousands of instances of unspeakable atrocities. Administration in the zones of the Reich assigned to France was correspondingly harsher than in the British and American areas, as was French treatment of German prisoners—a circumstance which provoked criticism from American Army HQ, followed by the transfer to American camps in mid-October of 90,000 sick and undernourished POWs. The cost of the German occupation was estimated on August 1 at \$98,000,000,000—far beyond recovery from the

share of réparations assigned to France at Potsdam.

French economy throughout the year was afflicted with inflation and extensive black market operations. The poor suffered semi-starvation while the middle class was progressively impoverished. On Christmas Day the Finance Ministry announced the devaluation of the franc to 119.1 to the dollar and 480 to the £. Whether corresponding increases in prices could be sufficiently limited to halt further inflation was doubtful by the close of the year.

Purgatory. The continued purge of Vichyites and collaborators was marked by numerous dramatic trials. State Prosecutor André Mornet pledged himself in mid-March to bring Pétain to trial within two months. On April 24 the 89-year-old Marshal arrived in Switzerland from Germany and surrendered two days later on the French border. During the preliminary interrogation and the treason trial which opened July 23 in the Paris Palace of Justice, he was accused by ex-Premiers Reynaud, Daladier and Blum of plotting with the fascist Powers ever since 1934 to destroy the Republic. Pétain contended that he had acted in 1940 and thereafter in accordance with a secret agreement with London, the existence of which was denied by Churchill. The erstwhile Chief of State at Vichy refused to answer questions as to whether he had sent congratulations to Hitler after the Dieppe raid and had asked that French troops be permitted to fight the Allies. A letter to Pétain from Admiral William D. Leahy, U.S. Ambassador in 1941-42, praised the Marshal for his concern with "the welfare and protection of the helpless people of France," but reproved him for bowing to Axis demands. Judge Pierre Mongibeaux of the High Court of Justice summoned Fernand de Brinon and Joseph Darnand as witnesses with the approval of the defense and over the objections of the prosecution. Both of these Naziphiles testified that Pétain had been consistently pro-Nazi. On August 15 he was judged guilty of "intelligence with the enemy" and given a death sentence—accompanied, however, by a recommendation of clemency. Two days later De Gaulle commuted the sentence to life imprisonment. The culprit was incarcerated in Fort Portalet in the Pyrenees to spend his remaining days in disgrace and perhaps in repentance.

Meanwhile Pierre Laval, evil genius of the French debacle, arrived in Barcelona by plane from Germany on May 2. Not until the end of July did the Franco Government order his expulsion. He surrendered to American forces in Austria, but was delivered over to Paris where he was imprisoned August 1. His trial opened early in October and was marked by many stormy scenes, culminating in his exclusion from the court room. On October 9 he was sentenced to death, confiscation of his property, and national degradation. On October 14, after a vain attempt to take his own life by poison, he was shot by a firing squad outside of Fresnes prison.

Among other collaborators judged guilty by purge courts were Charles Maurras, sentenced to life imprisonment on January 27; Admiral Jean-Pierre Esteva (life, March 15); Fernand David (death, April 14); Marcel Déat in absentia (death, June 19); Joseph Darnand (death, October 3); and Jean-Hérod Paquis (death, October 11). General Henri-Fernand Dentz, sentenced to death April 20, had his penalty commuted by De Gaulle, but died in prison on December 13. Joseph Barthélemy, Vichy Minister of Justice, died on May 15 before being brought to trial. Jacques Doriot was reported on February 23 to have been killed in

Germany in an air raid. Jacques Lemaigre-Dubreuil and Jean Rigaud, members of the Darlan-Giraud regime in North Africa, had the charges against them dropped on May 14, after Robert D. Murphy intervened on their behalf. The purge promised to continue into 1946, but under normal, rather than exceptional, court procedures, as voted by the Constituent Assembly on December 13.

De Gaulle Abroad. The crusade to enhance French diplomatic prestige to which the leader of the liberation was driven, both by his own convictions and by the exigencies of his political position at home, suffered many reverses. The heaviest blow was the loss of Syria. Early in May fighting broke out in Damascus between French troops and Syrian police. Following the failure of negotiations to end hostilities, Churchill, with Truman's approval, dispatched a virtual ultimatum to De Gaulle on May 31 demanding that he order French troops to cease firing and return to their barracks. Having no power to refuse, De Gaulle complied but blamed Britain for violating the Levant Accord of 1941, concentrating troops in Syria and Lebanon, plotting against French interests, and surreptitiously arming the natives. His proposals for a Five-Power Conference on Near Eastern problems were rejected by London. At the end of June Paris refused to permit French officers to be decorated at the British Embassy and deported Lady Spears, wife of Maj. Gen. Sir Edward Spears, former British Minister in Syria.

In a mood of futile wrath, French spokesmen voiced suspicions of the motives of British officials and American oil companies in Syria and reluctantly agreed in late July to turn over all important garrisons to the native government. Although the Cabinet ratified the UNO Charter on August 14, all hopes of an Anglo-French alliance came to nothing, thanks in part to a wide-spread French conviction that Britain had driven France out of the Near East. On December 13 an Anglo-French pact provided for confirmation of Syrian and Lebanese independence and evacuation of all French and British troops. A formula of "mutual support and consultation" did not disguise the fact that the new France had suffered a major humiliation.

Meanwhile President Truman on May 18 had invited De Gaulle to visit the United States. The General, accompanied by Bidault, Chief of Staff Alphonse Pierre-Juin, and other officials, flew to Washington on August 20 and was warmly received, despite Truman's rebuke to the French press for "unfairness" toward America. The joint communiqué of August 25 bespoke "fundamental harmony" and "even closer cooperation." De Gaulle then visited New York, Chicago, and Ottawa. On August 30, after his return, it was disclosed in Paris that the Government had asked the United States for a loan of a billion dollars. On December 4 an agreement for a loan of \$550,000,000 was signed with the Export-Import Bank. Said Ambassador Bonnet: "While this loan will cover only a small part of the total requirements of France for her rehabilitation and reconstruction, it is extremely helpful at the present time and is an encouragement to France in her vigorous efforts to restore her economy."

De Gaulle at Home. The year's developments in domestic politics began with the January threat of Pierre Mendès-France, Minister of National Economy, to resign in protest against the allegedly inflationary policies of René Pleven, Minister of Finance. De Gaulle persuaded him to remain. Pleven symbolized the conservative orientation of De Gaulle himself. In his moderate program he was

opposed by the Socialists, temporarily endorsed by the Communists (so long as he made the Soviet alliance the keystone of foreign policy) and granted consistent support by the new Catholic party of the Christian Democrats or *Mouvement Republicain Populaire* (MRP) whose left wing comprised Catholic liberals and whose right wing embraced sundry clericalists, ex-Vichyites, and reactionaries. When Moscow failed to support French proposals on numerous issues, De Gaulle and Bidault (MRP) strove, also in vain, for a British alliance and a "Western Bloc." This circumstance, coupled with the disaffection of many followers, caused Maurice Thorez, Jacques Duclos, and other Communist leaders to seek a *rapprochement* with the Socialists on a program of nationalization of banks and utilities. Early in March De Gaulle refused to commit himself to such measures, though they were supported by Mendès-France, who now withdrew from the Cabinet.

On April 29, in municipal elections, the voters of France, 23,000,000 strong (with women voting for the first time), exercised their suffrage rights, in abeyance since 1937. In this and later local elections, the MRP and the Communists won notable successes. Communist proposals for a Left coalition continued to be resisted by the Socialists. In preparation for national elections the Consultative Assembly quarreled with De Gaulle over his insistence that the Cabinet should not be responsible to the proposed Constituent Assembly and that the latter should consist of two chambers and not enjoy legislative power. On July 29 the Constituent Assembly, 210-29, rejected De Gaulle's proposal for a referendum as to whether the Constitution of 1875 should be retained, amended or replaced. On August 8 the Cabinet approved a compromise under which the voters would choose a National Assembly on October 21 and also decide whether it should frame a new constitution or merely act as a Chamber of Deputies, to be complemented by a Senate under the 1875 Constitution. In the former event, it would sit for a maximum of seven months and wield limited legislative, as well as constituent, authority.

While Left demands in September for a change in the scheme of proportional representation favored by the Cabinet (based on the population of Departments according to the 1936 census) were rejected by De Gaulle, he nevertheless granted 16 additional seats to the seven most populous Departments. Cantonal elections on September 23 revealed increasing Socialist and Communist strength. The referendum ballot in its final form posed two questions: "Do you want the Assembly elected today to be a Constituent Assembly?" and "If the electorate votes 'yes' to the first question, do you agree that public authority should be exercised, until the new Constitution is completed, in accordance with the attached project of the Government?"—i.e. with the Assembly electing a new President of the Government, writing a new Constitution and sitting for seven months as a parliament with qualified power to legislate and to oust the Cabinet by majority vote. On the eve of the balloting De Gaulle reiterated his pleas for a "Yes" answer to both questions, asserted that he and the Cabinet would resign to the new Assembly, and indicated that he would refuse to resume office if the country voted "No" to either question.

The Election of October 21. On the third Sunday of October, 96 percent of the voters of France asked for a new Constitution with a resounding "Yes" to Question 1, accompanied by a somewhat smaller "Yes" to Question 2. At the same time they chose

586 members of the new Assembly. Of the 522 deputies of metropolitan France, the Communists elected 142, the MRP 140 and the Socialists 133. Moderates numbered 48, independents and miscellaneous 40 and Radical Socialists 19. Of the winning candidates 5 percent were women and two-thirds were new to political life. Workers and employees were most numerous, professors and teachers next, and lawyers third in the representation of occupations.

The result, paradoxically, was a triumph both for De Gaulle and for his severest critics. The Communist victory was as striking as the eclipse of the moderate and once powerful Radical Socialists, whose venerable leader, Edouard Herriot, had been liberated from a Nazi concentration camp by Soviet troops in April and had returned to France, via Moscow, in May. The prewar multiplicity of parties, moreover, was greatly reduced. Although 18 groups were listed in the returns, 10 had not more than six deputies each. The three major parties, each of which obtained 4,500,000 votes, had four-fifths of the deputies. The extreme Right (most of whose legislators had voted for Pétain in 1940 and were therefore ineligible) had all but disappeared. De Gaulle, warmly supported by the MRP as the new mass party of the Center, appeared to be vindicated. But the Socialists and Communists, who between them had a clear majority of the Assembly, had little sympathy with his conservatism and his liaison with the MRP.

The Assembly met on November 6. De Gaulle and the Cabinet submitted their resignations. The General, making a public appearance for the first time in civilian clothes, agreed to resume office only if the three major parties would form a coalition. On the 8th, the Assembly chose as its presiding officer Socialist Felix Gouin, chairman of the old Consultative Assembly. Despite disagreements over the composition of the Cabinet, De Gaulle was unanimously elected President of the Provisional Government on November 13.

Toward the Fourth Republic. The new epoch began with thunder on the Left. The Communists insisted upon having one of the three chief Ministries: War, Foreign Affairs, or Interior. De Gaulle refused and resigned on November 16. Thorez charged that the President, by casting aspersions on the party's patriotism, was insulting its 75,000 war dead. De Gaulle in a broadcast argued that he could not entrust to the Communists control of diplomacy, the army or the police because this would violate "the French policy of equilibrium between the two very great political Powers which I believe absolutely necessary for the interests of the country and even for peace." The Communists proposed the election of Felix Gouin as President of the Government. On the 19th, however, the Assembly, with the Communists abstaining, voted to ask De Gaulle to renew his mandate. The result was a compromise. De Gaulle himself assumed the new post of Minister of Defense, controlling the Ministries of War, Air and Navy. Four new Ministers of State were named. The Cabinet of November 21 was composed as follows:

President of the Provisional Government and Chief of the Armies—Charles de Gaulle.
 Armies—Edmond Michelet, MRP.
 Armaments—Charles Tillon, Communist.
 State—Vincent Auriol, Socialist; Francisque Gay, MRP; Louis Jacquinot, Democratic Alliance; Maurice Thorez, Communist.
 Justice—Pierre-Henri Teitgen, MRP
 Interior—Adrien Tixier, Socialist
 Foreign Affairs—Georges Bidault, MRP
 National Economy—François Billoux, Communist.
 Finance—René Pleven, Republican Socialist.

Industrial Production—Marcel Paul, Communist.
 Agriculture and Supplies—Pierre Tanguy-Prigent, Socialist
 Public Works and Transports—Jules Moch, Socialist
 Labor—Ambrose Croizat, Communist.
 National Education—Paul Giacobbi, Radical Socialist.
 Colonies—Jacques Soustelle, Democratic Socialist Union of Resistance.
 Post and Telegraphs—Eugene Thomas, Socialist.
 Population—Robert Prigent, MRP
 Reconstruction—Raoul Dautry, non-party technician
 Information—André Malraux, independent.

"Citizen de Gaulle" (as Socialist André Philip called him) now endorsed plans for nationalization of credit and electric power. On November 23 the Assembly gave his Cabinet a unanimous vote of confidence. On December 2, by a vote of 521 to 35 the deputies passed bills nationalizing the Bank of France, the *Crédit Lyonnais*, the *Société Générale*, the *Comptoir National des Comptes* and the *Banque Nationale*, with stockholders receiving government bonds in place of their shares in the bank, which were put under the direction of a National Council of Credit. Work also began in December on a new Constitution. But De Gaulle's concessions to the Left failed to satisfy his critics. At year's end a new crisis developed over the President's proposal for defense credits of 125 billion francs in a total budget of 487 billions. When the Socialists demanded a 20 percent reduction in proposed military expenditures, De Gaulle again resigned while his opponents denounced him for making the issue one of confidence. In a 36-hour session, with the clock turned back to midnight of December 31, the Assembly evolved a compromise by which a 5 percent cut was approved, to be enlarged to 20 percent if the Government by February 15 had not introduced its plan for army reorganization.

New frictions followed over the food crisis and the issue of executive powers in the new Constitution. On January 20, 1946, De Gaulle resigned for the third time in nine weeks—now "finally," and in protest against Leftist demands for smaller military appropriations and an omnipotent parliament. Whether a stable Socialist-Communist bloc or a viable Socialist-MRP coalition would emerge to draft the Constitution and inaugurate the new regime was uncertain in the immediate aftermath of De Gaulle's exit. Meanwhile the coalition carried on and elected Felix Gouin to the Presidency.

Watch on the Rhine. In France, as elsewhere, politicians and patriots were preoccupied with the quest for military security. And in France, as elsewhere, few realized that in the atomic age security could no longer be had through armies, navies, strategic frontiers and efforts to weaken potential foes. French eyes remained fixed on the Rhine frontier and the traditional enemy beyond it. Early in the year De Gaulle expressed lack of confidence in any international regime in the Rhineland. Paris demanded French control of the Saar, the creation of an "independent" Rhineland under French protection, and the separation of an internationalized Ruhr from any reconstituted Reich.

This conception received little support in London, Moscow or Washington. French power alone was incapable of realizing it. Late in April, French occupation of Stuttgart provoked a request from SHAEF for evacuation of the city on the ground that it was needed as HQ of the U.S. Seventh Army. By the terms of a compromise, French troops were permitted to remain. The arrangements outlined at Yalta and confirmed at Potsdam for French participation in the occupation and administration of the broken Reich were received in Paris with qualified enthusiasm. In September a French memorandum to the London Council of Foreign Min-

isters asked for delay in setting up a unified German regime and for the exclusion of the Rhineland and the Ruhr from the control of any German authority in Berlin. On September 22, De Gaulle appealed for internationalization of the Ruhr and permanent French occupation of the Rhine.

Having discovered no evidence of foreign support for such a program, the Quai D'Orsay instructed the French representative on the Allied Control Council in Berlin to abstain from voting on all projects for a unified German administration, contending that France had not been a party to the Potsdam accords proposing such a development. Since unanimity was required, this decision prevented action. In mid-November Paris vetoed the desire of Washington, London, and Moscow to permit German trade unions to amalgamate on a national scale, since such a step would imply that the Ruhr and the Rhineland were properly part of "Germany." On November 21 Byrnes urged Maurice Couvé de Murville, director of the Quai D'Orsay who had come to Washington to plead for Rhenish "independence," to ask his Government to end the Berlin deadlock. Paris indicated that it would do so if the Big Three would agree to a "provisional line of demarcation" in western Germany beyond which the authority of the proposed central agencies would not extend. Eisenhower publicly reproved the French Government for blocking the economic and administrative unification of the Reich. The stalemate remained unbroken at the end of the year.

Diplomatic Dilemma: "Grandeur" and Impotence. De Gaulle's incessant quest for national "greatness" was foredoomed by French weakness in a world inevitably dominated by America, Britain, and Russia. His hopes of enhancing French bargaining power by playing off the Atlantic giants against the USSR were frustrated by the fact that an enfeebled France had nothing to offer to either. Moscow resented French projects of a "Western bloc" as well as the ill-concealed antipathy of French conservatives toward the Soviet Union. Washington was irritated by French "obstructionism." London capitalized upon French helplessness.

The weakness of the French position was demonstrated anew during the London and Moscow Conferences of Foreign Ministers. At the September meeting Bidault contributed to failure by siding with Bevin, Byrnes, and Wang against Molotov on all controversial Balkan questions, not out of concern for French interests in the Balkans and still less on principle but only because Paris was wholly dependent upon British and Chinese aid in Indo-China, where native rebels threatened an end of French control. France restored the lease-hold of Kwangchowan to China by an accord of August 18, but aroused Chinese resentment by refusing to follow the example of other Powers in giving up extraterritorial privileges. French exclusion from the Moscow Conference provoked irritation in Paris and requests for explanations and reassurances.

The new France could not hope to play a Great Power role anywhere in the world unless Russia and the Anglo-American bloc should become rivals for global hegemony. Yet discord among the Big Three threatened ultimate consequences which would be as disastrous to France as to all other nations. Between these grim alternatives, French diplomacy found no middle course in 1945. A possible solution was suggested in vigorous French championship of the liberal tradition. On May 25 the Foreign Affairs Committee of the Consultative

Assembly proposed that the Allies jointly demand the resignation of Dictator Franco. In June Paris made apologies to Madrid over the action of a mob in Chambery in attacking a train full of Spanish nationals returning from Germany. The violence was provoked by reports that the train contained members of the Spanish Blue Division which had fought beside the Nazis in the invasion of Russia. In December the French Government proposed consultations among Paris, Washington, and London looking toward severance of diplomatic relations with Franco and other forms of pressure to bring about the overthrow of Spanish Fascism.

Whether such initiatives would produce results and, if so, whether they would constitute a new basis of French foreign policy was doubtful. When the powerless strive for power, the result is frustration—as the Left parties tacitly recognized at the turn of the year in their opposition to De Gaulle's plans for extensive rearmament. The new France might find the road to a new freedom by creating a new polity, a new economy, and a new society within the frontiers of the Republic, and by promoting the unity of the Super-Powers and the success of the U.N.O. It could never find glory by petulance, obstructionism, and hopes for a rift among the new masters of the world.

See CHINA, GERMANY, GREAT BRITAIN, INDIA, CHINA, ITALY, SPAIN, SYRIA, U.S.S.R., UNITED STATES.

FREDERICK L. SCHUMAN.

FRANKLIN INSTITUTE. The Franklin Institute of the State of Pennsylvania for the Promotion of the Mechanic Arts, founded in 1824, is devoted to the increase of useful knowledge, to the encouragement of invention and discovery, and to the education of the public in the achievements of science and industry. Its very title has always indicated a desire to do honor to Benjamin Franklin.

The Franklin Institute includes in its activities: publication of *The Journal of The Franklin Institute*, established 1862; lectures presented about twenty times a year by distinguished persons in science and industry; the Bartol Research Foundation which is devoted to research in pure science; the Biochemical Research Foundation devoted to the study of diseases from the chemical viewpoint; the technological Library which now numbers 126,000 volumes and 40,000 pamphlets devoted to works of applied science and technology. The Library also contains a collection of patent literature. The two laboratories, the machine shops, and the staff of the Institute all worked to the fullest extent in the war program.

Another important activity is the Committee on Science and the Arts, formed of 66 members of the Institute, which reviews in great detail many of the advances of science and technology. It recommends to the Board of Managers those persons deserving the annual awards of the Institute, which are formally presented at Medal Day exercises in the spring. A Franklin Medal, highest award of the Institute, was presented in 1945 to Harlow Shapley, Director, Harvard College Observatory, Harvard University, Cambridge, Massachusetts, in consideration of his many valuable contributions to the science of astronomy, and especially of his work in the measurement of the vast distances necessary for the determination of the nature and extent of our galaxy, as well as those of other galaxies external to ours.

The Institute also maintains in its new building, erected in 1933 as a national memorial to Benjamin Franklin, a scientific and technological Museum containing thousands of active exhibits, the Fels Planetarium, an Observatory open to the public, and a Seismograph. To make Franklin better known and emulated, the National Franklin Committee was formed in 1941. Through its efforts information concerning all phases of Franklin's life is distributed free of charge.

The Franklin Institute membership now numbers about 5,500. The President, reelected in 1943, is Charles S. Redding; Secretary and Director, Henry Butler Allen. The Franklin Institute is located on the Benjamin Franklin Parkway, Philadelphia 3, Pa.

FRENCH EQUATORIAL AFRICA. A French colonial territory in north central Africa consisting of four colonies: Chad (461,202 sq. mi.), Gabon (92,218 sq. mi.), Middle Congo (166,069 sq. mi.) and Ubangi-Shari (238,767 sq. mi.), making a total of 959,256 sq. mi. Though administratively separate, the French mandated area in the Cameroon is included under this heading, with 166,489 sq. mi.

Government. French Equatorial Africa is administered as a unit by a Governor-General whose seat is at Brazzaville and who makes up a budget for the whole area. He is assisted by an administrative council. Each of the four colonies has a Governor to supervise local affairs. There are no really representative institutions, though the Free French régime—to which the Negro Governor Félix Eboué declared the region's loyalty in 1940—enunciated policies looking toward the closer association of the native peoples with the rest of the empire. During the war Equatorial Africa played an important part by providing overland access to the Nile Valley and Middle East and by forming a territorial base for the de Gaulle regime at a time when France and most of her empire was in Axis or Vichy hands. A powerful radio station was constructed at Brazzaville in 1942 for broadcasting in various languages to many parts of the world. In 1944 the budget was reported to be balanced at 600,000,000 francs.

Events, 1945. Ever since the invasion of French North Africa and the surrender of Vichy forces in French West Africa, the Equatorial colonies had been less important both strategically and politically. Nevertheless, the Provisional Government of General de Gaulle made it plain that the African territories would not be neglected as they had been before the war. Plans were also made to have the colonies represented in the National Assembly called to draw up a new constitution not only for France but the new French "federal union" comprising the overseas empire.

Labor troubles were reported from Duala in the Cameroon during the fall. On Sept. 21 a strike of railway workers there led to a call for troops, followed by bloodshed in which eight natives were killed and twenty wounded. Four days later, a labor union leader shot the secretary of the local chamber of commerce.

Characteristics of the Population. In 1943 the population of French Equatorial Africa was calculated at 3,524,710, of whom 6,100 were Europeans, or .2 of one percent. In the Cameroon there were 2,500,000 natives and about 3,000 Europeans. Compared with Nigeria or the Belgian Congo these figures represent low densities. In the south and center there dwell Bantu Negroes, while in the north the natives are Sudan Negroes with strong Hamitic and some Arab intermixture. Those in the

latter (and drier) region are largely Moslems; the Bantu in the wetter areas are pagans—except those few who have been converted to Christianity.

In general native institutions have been less disrupted than in the Belgian Congo or in West Africa. Educational opportunities are provided largely by missionary societies.

The Country and Its Economy. Along the coast are vast forest tracts, as well as bordering the rivers in the interior. In the northern part lies the Sudan with its open savannas, which shade off into steppe and desertic country as one proceeds northward into the Sahara.

The occupations of the inhabitants depend largely on these climatic conditions: tropical agriculture in the south and center, and more pastoral pursuits in the drier Sudan. The resources of French Equatorial Africa are very largely undeveloped. In the Cameroon there are a number of plantations, started by the Germans. For many years the French tried the system of granting large concessions to capitalist concerns, much after the fashion of Leopold II in the Congo. In recent years this system has been in less favor, because it failed to provide for an orderly and sound economic development or to safeguard the welfare of the natives. In the Cameroon the French Government is bound to observe the terms of the Mandate (Class B) concerning monopolies, tariffs, native rights and so forth. During the war rubber production in the Cameroon was increased from 773 tons in 1939 to 3,000 tons in 1944. Other important exports from this territory are: peanuts, palm oil, hides, timber, cacao and coffee. From French Equatorial Africa come much the same products. Large numbers of cattle, sheep, goats, horses and camels are raised in the north, but are not exported for lack of a ready market. The colonies' mineral resources are believed to be valuable but have only begun to be exploited.

The value of exports from Equatorial Africa in 1942 was 469,314,000 francs, and of imports 778,358,000 francs. The relevant figures for the Cameroon in 1938 were 251,959,000 francs and 215,212,000 francs. The principal ports are Duala (Cameroon), Port Gentil, Libreville and Pointe Noire. The latter is connected with Brazzaville on the Congo by a railway (318 miles). There are 319 miles of railway in the Cameroon. In both the mandated territory and in Equatorial Africa there are several thousand miles of road, of which only a part is suitable for heavy, all-year traffic. New road links were built during the recent war to speed goods to the Middle East and Ethiopian fronts.

ROBERT GALE WOOLBERT.

FRENCH GUIANA. A French territory in northern South America, comprising the colony of French Guiana (7,720 sq. mi.; pop. 31,000) and the hinterland territory of Inini (27,020 sq. mi.; pop. 6,100). In 1944 the penal settlement contained 2,240 men. Chief towns: Cayenne, capital, 13,936 inhabitants, Mana, Oyapock, St. Laurent, Sinnamary. Chief crops: rice, maize, manioc, cacao, coffee, bananas, and sugar cane. There are large forests rich in various kinds of timber. Gold mining is the chief industry. Silver, copper, iron, lead, mercury, and phosphates are found. Foreign trade (1940): imports 64,154,188 francs; exports 44,502,181 francs (franc averaged \$0.0208, 1940). The budget (1944) was balanced at 42,510,110 francs. For the territory of Inini the budget (1944) was balanced at 4,323,900 francs. Shipping (1940): 878 vessels entered and cleared. Administration is controlled by a Governor, assisted by a privy council

of 7 members. There is a Council General of 8 elected members elected by French citizens living in the colony. The territory of Inini is under the direct administration of the governor of French Guiana, assisted by an administrative council of 4 members acting in an advisory capacity. Governor, Jean Rapenne (appointed March, 1943).

FRENCH INDIA. The five French colonies in India—Chandernagor, Karikal, Mahé, Pondichéry, and Yanam. Area, 196 square miles. Population (1941), 323,295. Capital, Pondichéry, 53,101 inhabitants. Education (1942): 67 primary schools and 4 colleges, and 13,319 students. The chief crops are rice, manioc, and groundnuts. Livestock (1942): 35,563 cattle, 23,024 sheep, 17,700 goats. There are cotton and jute mills at Pondichéry and Chandernagor. Trade, at the ports of Pondichéry and Karikal (1942): imports 35,749,000 francs; exports 17,850,000 francs. Shipping (1942): 86 vessels entered and cleared. There were 43 miles of railway open to traffic. Budget (1943): 3,274,850 francs. The colonies are divided into 5 dependencies and 17 communes, having municipal governments. There is an elective general council. Governor, Louis Bonvin.

FRENCH INDOCHINA. A dependency of France, in southeastern Asia, comprising the divisions shown in the accompanying table. On July 30, 1941, the Vichy French regime signed a pact with Japan by which Japanese troops were allowed to occupy certain points in French Indochina. On Mar. 10, 1945, the Japanese seized complete control of the country but after V-E Day, September, 1945, following the defeat of Japan, French officials resumed the administration of French Indochina.

<i>Divisions</i>	<i>Sq. mi.</i>	<i>Pop. (1936)</i>	<i>Capital</i>
Annam *.....	57,143	5,656,000	Huê
Cambodia *.....	69,884	3,046,000	Pnom-Penh
Cochinchina *.....	25,096	4,616,000	Saigon †
Laos *.....	89,189	1,012,000	Vientiane
Tonkin (Tongking) *..	44,784	8,700,000	Hanoi †
French Indochina *....	286,096	23,030,000	Hanoi †

* Protectorate. † Colony. ‡ Exclusive of the leased territory of Kwangchowan (309 sq. mi.; pop. 230,000 in 1936) which was returned to China by the French on Aug. 18, 1945. † The capital city is Hanoi but during certain seasons of the year, when climatic conditions are oppressive, the government offices move to Saigon.

Chief towns (with 1940 population for Hanoi; 1936 figures for the rest): Hanoi (capital) 134,849, Binh-Dinh 147,199, Cholon 145,254, Haiphong 122,000, Saigon 110,577, Pnom-Penh 102,678, Huê 33,222.

Production. The chief agricultural products are rice, maize, pepper, spices, tea, kapok, groundnuts, copra, and rubber. The forests in the north produce tropical hardwoods, bamboo, herbs, and essential oils. Fishing is an important native occupation. Included in the minerals produced are anthracite, gold, chromite, manganese, tungsten, antimony, tin, zinc, and iron.

Foreign Trade. In 1942, imports were valued at 1,378,000,000 francs; exports 2,471,000,000 francs. Imports included cotton and silk tissues, metal goods, and motor vehicles. Chief exports: rice, rubber, fish, coal, pepper, cattle, hides, corn, zinc, and tin ore.

Finance. There is a common budget for the whole of French Indochina and a separate budget for each of the states. General budget (1941): 1,290,147,500 francs; extraordinary budget (1941): 189,337,800 francs. On Jan. 1, 1941, the outstanding debt of French Indochina totaled 2,515,894,110

francs, including government loans and loans for the purchase of railway material.

Government. Under French rule the administration of the whole of French Indochina was headed by a Governor General and he was assisted by a Secretary General, a government council, and a grand council for economic affairs. Each of the four protectorates (Annam, Cambodia, Laos, and Tonkin) was headed by a Resident Superior and he was aided by a protectorate council and a council of economic affairs. The colony of Cochinchina had a Governor at its head and he was assisted by a colonial council. Governor General: Adm. Thierry d'Argenlieu (appointed September, 1945).

Events, 1945. French Indochina, which has a territorial area somewhat larger than the state of Texas, is of great strategic importance due to its location at the base of the large Malay peninsula which juts out from the southeastern coast of the Asiatic Continent. From the standpoint of its location, French Indochina resembles the state of Florida on the North American Continent.

Aside from an extensive coastline on the South China Sea, Indochina has a long contiguous border with China's southern provinces of Kwangtung and Yunnan, and with Siam (Thailand) and British Burma. The only railway extending into China's important province of Yunnan is French-owned and extends from the French port of Haiphong on the Gulf of Tonkin, across northern Indochina, to Kunming. The Japanese seized the section of the railway running through French territory shortly after Pearl Harbor and confiscated large stocks of American goods stored at Haiphong or en route to Chinese territory.

The frequent mention of French Indochina in connection with the outbreak of the war in the Pacific in 1941, and the U.S. Congressional investigations concerning the Pearl Harbor incident in 1945 emphasized the important position of the French Colony in the oriental war situation. International interest in the Colony has continued due to the struggle of the natives for independence from French rule.

Gen. Georges Catroux's Explanation. Gen. Georges Catroux, who occupied the position of Governor-General of Indochina in 1940, made some interesting disclosures concerning Japanese pressure, American and British policy, and French diplomatic policy in Indochina in the months preceding the war. Gen. Catroux's statement was issued from Moscow on August 1, 1945, where he was serving as Ambassador to Russia. His statement, which occupied more than two columns in the New York papers (Associated Press report), constituted a denial of charges made at the trial of Marshal Henri-Philippe Pétain in Paris that Pétain had removed Catroux "because he favored the Japanese demands concerning the occupation of the province." Catroux claimed that he attempted to save Indochina by a policy of "negotiating and stalling."

The following is a brief summary of his points: "The commander of the Japanese Army in Kweichow Province of China (directly north of Indochina) was constantly threatening and criticizing Indochina for 'assisting' China by permitting the transport of materials across Indochina into Chinese territory. The Japanese Army radio constantly broadcast these protests and demands—the Japanese were particularly angry regarding the transport of gasoline to Kunming under the Chinese-American barter agreement. As a result, I, of my own accord, stopped the transit of gasoline on June 16, 1940.

"As I was very anxious to know the attitude of the United States if the Japanese attacked Indochina, I asked the French Ambassador in Washington on June 18, to take up the matter with the State Department. On the following day I asked the French Ambassador in Washington to request the State Department for permission to ship 120 aircraft and aircraft-guns to Indochina for the purpose of 'maintaining the status quo in the Pacific.'

"On June 19 I received, through the French Embassy in Tokyo, a Japanese ultimatum to immediately stop all transit of goods to China over the French railroad. The French Ambassador in Tokyo declared that acceptance alone could prevent aggression and represented the last chance to save Indochina.

"On June 20 the French Ambassador in Washington transmitted to me the reply of the Under-Secretary of State: 'the United States Government did not believe that it could enter into conflict with Japan and that furthermore it would take no action if Japan attacked Indochina.'

"The French Ambassador in Washington observed that in the circumstances, the only course open was to close the Chinese frontier. To this the Under-Secretary of State remarked, 'I will not answer you officially but that is what I would do in your place.'

"With reference to the request for a permit to purchase arms in the United States the Under-Secretary said the application 'would be welcomed like that of any other friendly Government.' Nothing came of the request, however."

Gen. Catroux then explained that his appeal for assistance from the British "was no more encouraging." He explained that he had to depend on his own resources because the Japanese army in South China was superior to the French force in Indochina; that the Japanese had 200 aircraft against only twenty-five modern machines. In addition Indochina had no naval force and only sufficient munitions for a month's campaign. It would have to face a combined land and sea attack, the outcome of which would be Japanese occupation and the French loss of sovereignty.

Gen. Catroux accepted the Japanese demands and on June 29 a Japanese transit control commission, under General Nishihara, arrived and established itself on the border between French Indochina and Chinese territory. Gen. Catroux then said, "From then on my policy was to temporize and hold on, waiting for a more favorable turn to the war. My action then accorded with the policy of Great Britain, which had also yielded to Japanese demands and closed the Burma Road to Chinese transit . . . I sent a purchasing mission to Washington. I gave the Japanese Army no pretext for intervention, insisted on mutual respect for the transit agreement, and refused encroachment on the sovereign rights of France.

"In order to divert Japanese attention from their territorial aims, I pressed them toward economic understandings that could be advantageous to both countries. However, I concluded no agreements and always stipulated that Japan must respect our sovereign rights. The only agreement made provided for a mixed airline run by aircraft of both countries over the Canton-Hanoi route. I refused Japanese demands on two important points:

(1) I refused on July 2, 1940 a demand by the Japanese General Staff to appropriate 5,900 tons of wolfram and 6,000 tons of antimony held in bond in Tonkin by China on behalf of the United States.

(2) I turned down an offer by the Japanese General Nishihara for a defensive alliance, and, contrary to report I did not recommend such an alliance to the Pétain Government in France.

"I vainly tried to make my position and actions understood by the Pétain Government. But I was repudiated and by this act was destroyed the fragile equilibrium that I had built up. . . . But this is another story." General Catroux concluded by declaring he had documentary proof to substantiate his actions, which he regarded as justified in view of the lack of allied aid.

State Department Corroboration. The State Department said, following perusal of Catroux's statement, that in the period before America's entry into the war it had never informed another country it would take armed action against an aggressor. This was true when Indochina was penetrated by Japan in 1940, and had been true when Germany invaded Poland, as also when Japan invaded Manchuria in 1931. However, the United States had made "vigorous representations" to Japan against her policy in Indochina in 1940 and the record had been published.

New Charter for Indochina. In an effort to improve the relations between France and the natives of Indochina the French Cabinet on March 23 approved a new charter for the colony which provided "virtual economic autonomy and democratic reforms in the political and economic set-up," according to the report from Paris. The Charter referred to the "Federal Union of France," implying replacement of the present colonial system by a federation of semi-independent states united under the French flag.

The Charter was designed to go into effect as soon as possible after Indochina was liberated from the Japanese. Under the new Charter the five separate parts of the colony—Tonkin, Cochinchina, Cambodia, the territory of Laos and Annam—would be governed by an over-all, democratically elected assembly, over which a Governor-General would preside. Indochina itself would be represented in the body of the future federated union. In general the proposed charter guaranteed that Indochinese as well as the French would have the opportunity to vote and hold government posts of all kinds, including those of ministers.

In a statement accompanying the announcement of the new "French Union," Gen. Charles de Gaulle said that the basis of all future laws in Indochina "should be liberty of thought, liberty of creed, liberty of press, liberty of assembly and all other democratic liberties." He said that all citizens of the French Union qualified to hold office would be eligible for all ranks in an Indochinese Army and Navy and air force to be created in future.

Final decision on the formation of the "French Union" would have to await the constituent assembly which will write the new French Constitution. Tentatively, however, it was thought that each colony or protectorate would be given a status commensurate with its development. Thus, in Indochina it was thought that there may be three, four or five colonies or protectorates sufficiently advanced to have elected assemblies. They would be represented in the "Assembly of the Indochinese Federation" which would send representatives to Paris. The Indochinese Assembly would control its own budget, economic and internal affairs, but decisions on foreign affairs and national defense would be left to France.

According to a report from Paris in the New York *Herald-Tribune* it was thought that the French Government was trying to "anticipate the

unwelcome idea of an international trusteeship of colonies" which it was thought would be submitted to the San Francisco Security Conference. Attention was called to the fact that the "French Union" would differ materially from the British Commonwealth, because the peoples of the component parts of the British Commonwealth are more highly developed.

Japanese Move Against French. A report by the German Transocean News Agency from Tokyo in mid-March stated that the Japanese Government had asked Henri Cosme, representative of Vichy France, "to discontinue his official activities." In addition the Japanese disarmed some 2,000 French troops at Shanghai. Also, the Japanese officially renounced a 61-year-old treaty with France concerning Annam, the Japanese purpose being to gain control of that 59,000 square mile section of Indochina. A Tokyo message said that King Baodai of Annam had declared his independence of France and in future would support the Japanese "Co-Prosperity Sphere."

On March 13, the Berlin radio announced that Cambodia, another important province, had declared its independence of France and also had joined the Japanese. Cambodia occupies the southwestern part of Indochina. An official report from Paris admitted that French garrisons in South Cochinchina and Annam, outnumbered 10 to 1, had surrendered to the Japanese. It was announced that the border between Indochina and Thailand had been closed. Paris claimed that French troops in northern Tonkin were resisting the Japanese, "in accordance with orders from Paris."

On March 10, the Japanese military in Tonkin took Vice Admiral Jean Decoux, the French Governor General of Indochina into "protective custody." The Japanese commander accused the French official of "insincerity" and secret activities designed to join hands with the Allies. The Japanese action in taking over control of all Indochina was made following the alleged refusal of the French authorities to cooperate with Japan in measures for the "joint defense" of the country. The Japanese announced on March 13 that they had overcome all French resistance along the northern coast, and that further high French officials had been taken into custody.

They stated also that a considerable section of Northern Indochina, the Kwangchow, an area south of Canton, and sections along the Gulf of Tonkin, would be "restored" to China.

Among the Japanese "charges" against the French administration were that American submarines were using secret bases on the Indochina coast; that the 14th Air Force had a landing field at Taigin, forty miles north of Hanoi; that there was secret cooperation with U.S. air forces in China, Philippines and India; that American aviators had dropped supplies to French and guerrilla forces "many times."

A French officer who escaped from Indochina reported that the Japanese had 100,000 troops concentrated at key points, with some 30,000 near Saigon, the capital.

U.S. to Supply Arms. It was announced in Washington on March 12 that the French had requested ships to transport an army from North Africa to Burma, but Washington was not favorable to the project. The French stated they had approximately 30,000 French and native troops in Indochina. Washington regarded Indochina as located within the war theater of Admiral Lord Louis Mountbatten. It was announced in Paris on March 22 that the United States had agreed to

supply arms and other war materials to French and native forces which were resisting the Japanese. It was thought the arms would be delivered by air-borne units of the U.S. 14th Air Force already operating in that sector. The 14th Air Force reported on March 21 that it had strafed the Japanese in the Black River area west of Hanoi where French guerrillas were fighting the Japanese.

Adm. Chester W. Nimitz reported that U. S. carrier aircraft of the Pacific Fleet had attacked Japanese naval contingents off the coast of Indochina. It was thought the U.S. Forces had intercepted Japanese naval convoys operating between Saigon and Singapore. The point of the attack was between Saigon and Cam-Ranh Bay, the last mentioned being the best naval base on the south-east Asiatic coast, rated as one of the world's best harbors.

It was reported late in March that the Japanese had seized Kwangchowan, the French base on the China coast south of Canton and north of Hainan Island.

China Invades Indochina. The military forces of China entered the Indochina picture late in July by invading the French colony along the border 93 miles north of Hanoi. The Chinese forces were led by Gen. Chang Fa-kwei, well-known Cantonese commander. The Chinese had pushed the Japanese back along an 185-mile front and had severed the Japanese land communications from Kwangtung Province of South China to northern Indochina. The Chinese forces cut a 120-mile gap in Japan's "land-bridge" to southeastern Asia.

The entrance of Chinese forces into northern Indochina raised political issues between China and France, according to reports from Paris late in September. On Sept. 15 Paris charged that the Chinese forces had refused entrance to their zone of the French General Marcel Alessandri. The French also charged that the Chinese were assisted by an American General Gallagher who was serving in an advisory capacity with the Chinese forces. The Chinese Premier T. V. Soong visited Gen. Charles de Gaulle on Sept. 19 in Paris and discussed Sino-French relations in Southwest China and in Indochina. According to telegrams from Paris Premier Soong informed de Gaulle that the Chinese intended to police northern Indochina until conditions became stabilized in that area. It also was reported that the Chinese had demanded control of the Yunnan Railway connecting Kunming with the sea at Haiphong. The Chinese stated they were cooperating with British forces which had been landed at Haiphong. The commander of the Chinese forces in Indochina was General Lu Han.

An Associated Press report from Hanoi on Sept. 28 explained the complications which had developed between the Chinese commander, Gen. Lu Han and the French commander Gen. Marcel Alessandri. The French commander refused to participate in the Japanese surrender ceremonies because the French flag was missing from the decorations of the main administration building from which France formerly ruled the colony. The Chinese explained that under the Allied agreement only the flags of the four major powers of the Potsdam Conference could be used. Paris announced on Sept. 29 that another commander of higher rank was being sent to Hanoi, Gen. Jacques Leclerc, who would take charge of French forces.

Growing Native Unrest. Lt. Gen. Sir William J. Slim, Commander of the British Fourteenth Army at Saigon, reported on Sept. 17 that the situation between released Frenchmen and native Annamese

was becoming "tense," and trouble was likely in the event of a "challenge" from either side. The British commander declared that the object of the British forces was threefold: (1) To disarm the Japanese; (2) evacuate war prisoners; (3) maintain order.

According to reports from Chungking French anxiety was due to the increasing activities of two native political parties which were agitating for complete independence of Indochina from French rule. The parties were the Viet Nam and the Viet Minh. It was claimed that the independence parties had their headquarters in Annam where the Chinese forces were quartered. It also was charged that the Japanese troops had turned over stocks of munitions to the nationalist parties.

According to a report from Paris in the New York *Herald-Tribune* the Chinese Empire was forced by France to surrender its sovereignty over Indochina in 1885. However, France was now willing to grant China railway and port facilities in the northern part of Indochina in order to give Southwestern China access to world trade.

A report from Chungking on Sept. 19 stated that China had given permission to the French to move 5,000 French troops from Yunnan province into Indochina. The French force had entered Yunnan when the Japanese invaded Northern Indochina. K. C. Wu, Chinese Minister of Information, stated that Chinese troops in Indochina had no other purpose than to assist in the disarming of the Japanese in accordance with the decisions of the Allied Chiefs of Staff. He said the Chinese had charge of all territory north of the 16th parallel which bisects Indochina. Wu said the Chinese had complied with three French requests: (1) That a French general participate in the Japanese surrender; (2) that 5,000 French troops which retreated into China be permitted to re-enter French territory; (3) that the French be permitted to use airplanes which had been flown into Chinese territory.

"Independence or Death." The Nationalist Party of Indochina, the Viet Nam, which received the "control" of the country from the Japanese in March, issued a proclamation on Sept. 7 declaring that Indochina was "free and independent of the French." Hanoi, the capital, was plastered with slogans reading, "Independence or Death." The other party, the Viet Minh, or the Communists, up to the present had cooperated with the Viet Nam. Armed guards of the two groups patrolled the city where some 25,000 French awaited liberation and where many armed Japanese were still at large. The head of the newly-formed national government, Ho Chin Minh, who has the title of "premier," declared that the native peoples intend to keep their independence at all costs. He said the French had labeled him a "communist and a bandit." Hanoi in September was facing famine and Premier Ho Chin Minh was trying to find boats to bring in surplus rice from Saigon. That the natives had some support in France was indicated in a declaration in Paris of Prof. Tran Duc-Thad, who claimed to head some 25,000 Indochinese laborers in France. He denounced the action of the French Government in dispatching large forces to Indochina under General Leclerc, and Admiral d'Argenlieu, and declared they would be resisted on arrival at their destination. He charged that Indochina's old culture had been destroyed; that the country was now 89 per cent illiterate, and that native industry had been suppressed in order to safeguard French markets. Another native leader, President Pham Von Bach

of the Southern Annamite provisional government, charged that the French had oppressed Annamite leaders who tried to organize resistance to the Japanese invasion; that the French had collaborated with the Japanese in trade at the expense and welfare of the people; that the French had failed to offer more than "token" resistance to the Japanese despite the presence of a large body of well armed French troops.

Dr. Sun Fo, President of the Chinese Legislative Yuan, urged that Indochina be placed under a protectorate of the United Nations. He foresaw "perpetual" internal strife if the French attempted to regain power. Sun Fo charged that Indochina was the "worst run" foreign governed colony in the Far East.

American Officer Killed. On Sept. 28 the senior American officer in Saigon, Lt. Col. A. Peter Dewey of Washington, D. C., was shot and killed in an outbreak of fighting in the northern outskirts of Saigon. Col. Dewey was connected with the U. S. Office of Strategic Services (OSS). Another OSS officer, Capt. Joseph Coolidge of Boston, was severely wounded. The American officers and some newspaper correspondents were besieged for several hours before the British were able to send a contingent of Indian Gurkhas to relieve them. The Americans were attacked by Annamese troops despite the fact the American headquarters was plainly marked with an American flag.

A contingent of air-borne American troops was landed at Hanoi on Sept. 16 for the purpose of assisting the evacuation of some 150 American war prisoners and allied civilian internees.

Col. Stephen L. Nordlinger, American officer who participated in the release of some 5,000 Allied prisoners of war in Indochina, stated in the course of an interview on Dec. 26 that the native independence movement was gaining in momentum. Col. Nordlinger spent two years in Indochina and became acquainted with the French and native leaders. He said that the native leader, Ho Chin Minh, and the French High Commissioner, Roger Sainteny, had held many conferences in an attempt to reach a peaceful compromise. He said that the native leader Ho probably would accept "Dominion status," if some method could be worked out whereby it could be guaranteed by the United Nations Organization. The French disagreed with the proposal.

Reports from Saigon in late September stated there was serious fighting between the French and Annamites and that the Annamites had declared a boycott against all French. Fighting started when some 1,500 French troops, who had been interned with 3,500 other Europeans, had escaped to China and then returned and made a surprise attack on the Annamites. The British Commander, Maj. Gen. Douglas O. Gracey, issued an order in the name of Admiral Lord Louis Mountbatten requiring the Viet Nam to suspend all newspapers; cease requisitioning buildings, and all Annamese police and armed forces to remain in barracks.

Anglo-French Pact. An Anglo-French pact concerning Indochina was signed in London on Oct. 10. The pact was signed by British Foreign Secretary Ernest Bevin and the French Ambassador René Massigli. It gave full recognition of French rights in Indochina and within the British Zone (south of the 16th parallel) the French civil administration will control and the British occupation shall only be "temporary."

The French announced the arrest of Prof. Tran Duc-Tad, leader of the Indochinese mission in France. The Indochina Communist Party on Oct.

10 denounced the British for "upholding the imperialist policy of France."

The French Second Armored Division together with naval forces from the French battleship Richelieu were landed near Saigon on Oct. 30. The landing of additional French contingents at Saigon had enabled the British to withdraw some of their forces from Indochina to the Netherlands Indies where they were greatly needed. The French forces were transported to Saigon in American ships.

A report from Chungking at the end of the year expressed fear that there would be serious trouble in Northern Indochina when the Chinese forces withdrew their troops due to the fact that the Chinese were in sympathy with the Indochinese Nationalists.

JOHN B. POWELL.

FRENCH LITERATURE. The year 1945 has been marked in France by a literary boom. Newly recovered freedom of expression tempted many writers who had been forced into silence or clandestine literature; political and social questions were again hotly debated; many new talents came to the fore, encouraged by the impatience of the public to break with the past and to hail a new era. Paper continued to be scarce, and books, printed in relatively small but high-priced editions, were quickly sold out. But the number of new works thus published was high, and several new reviews appeared while others, announced and apparently ready, are still awaiting paper allotment to come out. A few publishing houses which had been notoriously collaborationist have been placed under the direction of official administrators; new firms, often headed by former Resistance writers (Vercors, Seghers, editions of *Fontaine*, of *Confluences*) have been opened. The price of books is very high, reflecting inflationary conditions and the avidity of the French to invest their paper money into all that can be bought as well as their interest in thought and in art and their desire to escape from harassing material difficulties into the world of fiction and poetry.

Personalia and Literary Events. The *épuration* of the literary world has been conducted with laudable restraint, although with regrettable delay and some occasional inequality in the treatment meted out by different courts of justice. Two writers of some fame, Paul Chack and Robert Brasillach were sentenced to death; Maurras, probably more guilty than they, to life-imprisonment. Others, like Montherlant, who had compromised themselves more warily, are left free, though despised by the larger part of the reading public. André Malraux and André Chamson, two heroes of the Maquis, came back to civilian and literary life after the defeat of Germany freed them from their military posts. The outstanding deaths were those of Romain Rolland (on Dec. 30, 1944) and of Paul Valéry (on July 20, 1945). The former had just completed an important two volume work on Péguy which, unlike several recent books on that writer, remained this side of idolatry; the latter was celebrated universally as one of the official literary figures of France. His prestige and influence spread among thousands who could hardly understand his poetry. He had just published extracts from his *Troisième Faust* and an address on Voltaire. The 250th anniversary of Voltaire's birth had been celebrated in Paris with much pomp late in 1944, and with varied, and partisan, reactions in the public. The French Academy elected two new members, Emile Hen-

riot, a critic, and Edouard Le Roy, a philosopher, to replace Ernest Prévost and Henri Bergson. Colette was elected at the Goncourt Academy, to replace a writer who resigned, La Varenne; she is the first woman to be a member of that body of ten writers since Théophile, Gautier's daughter. The P.E.N. Club resumed its activities in Paris, with Charles Vildrac as Secretary-General. André Gide was back from North Africa, still revered by some, attacked by others. Literary prizes were again distributed with the usual fanfare of publicity and the real interest of the reading public: the Prix de la Pléiade which had gone to *Enrico*, by Mouloudji in 1943, crowned *Brutus*, by Roger Breuil. The Prix Populiste went to *Travail d'Homme*, by Emmanuel Robles, a colorful story of workmen building a dam, written with much social sympathy. The Prix Goncourt launched a collection of four brief novels, all centered around life in the Resistance movement, by Aragon's wife, Elsa Triolet, *Le Premier Accroc coûte deux cents francs*. A very important place is given to literature in the weekly newspapers: *Carrefours*, *Lettres Françaises*, in the weekly supplement of *Le Figaro*. *Les Nouvelles Littéraires*, under the editorship of Frédéric Lefèvre, appeared again on April 5, 1945. Among the monthly or quarterly reviews, whose number is steadily growing, are: *Etudes* (of the Jesuits), *La Vie Intellectuelle* (of the Dominicans), *Renaissances*, *La Nef* and *Fontaine* (all moved from Algiers to Paris), *Les Cahiers du Sud*, *Esprit*, *Messages*, *Confluences* (Lyon and Paris), *L'Arbalète* (Lyon), *Formes et Couleurs* (Lausanne), *La Revue de Paris*, *La Table Ronde* (with Thierry-Maulnier), *Les Temps Modernes* (with J. P. Sartre), *Saisons* (with Marcel Arland), *Les Quatre Vents* (with Henri Parisot), *Delta* (Angers), *Espaces* (Clermont-Ferrand), etc.

Biography, Criticism and Historical Works. Volumes dealing with French history were less numerous than during the war years when oppressed French readers turned to their past for a message of hope. But the public, isolated for several years, showed great eagerness to be informed about the outside world, especially Russia and America, and much desire to learn about the precise history of the Second World War, its causes and its probable consequences. Maritain's addresses to the French people between 1941 and 1944 were published as *Messages* (N. Y., Maison Française); Focillon's *Témoignage pour la France* (N. Y., Brentano's) is a posthumous record of courageous and lucid vision. Philippe Soupault's *Le Temps des Assassins* (N. Y., Maison Française) relates the writer's imprisonment in Tunis in 1942-43; François Mauriac collected his articles written in 1944 and 1945, after a long-enforced silence, under the title *Le Baïllon dénoué*. Claude Roy gave a vivid picture of the liberation of Paris in *Les Yeux ouverts dans Paris insurgé*. Jacques Debû-Bridel retraced the events of 1938-42 in *La Déroute*, and Jacques de Lacretelle treated the same subject in a small volume unworthy of its subject and of its author, *Libérations*. Pierre Lazareff, in *De Munich à Vichy* (N. Y., Brentano's), gave some insight into the secret deals of politicians and diplomats. Charles Reine, in *Sous le Signe de l'Etoile* (N. Y., Brentano's) testified with effective restraint against anti-Semitism, and a young philosopher, recently freed from German prison-camps, analyzed the moods of his companions in *Essai sur la Psychologie du Prisonnier de Guerre*.

Many volumes were published in 1945 on the past literature of France, reflecting the public's constant interest in its favorite writers and prob-

lems. Interesting new editions of texts of much present day interest have been given: Balzac's *Louis Lambert* by R. de Renéeville, Baudelaire's *Ecrits intimes* by Sartre, *Sade's Infortunes de la Vertu* by J. Paulhan and Chamfort's *Maximes* by Camus. Agrippa d'Aubigné was reprinted in Neuchâtel by Marcel Raymond. Pierre Brisson, Thierry-Maulnier and Daniel Mornet wrote on Racine, Aug. Bailly on Beaumarchais, Pintard on the 17th century *libertins*, A. Béguin on Léon Bloy. Gerard de Nerval, a poet rediscovered by our contemporaries, was edited in two separate volumes by G. Le Breton and Pierre Messiaen. Balzac's life was related at length by André Billy, while Dr. Bonnet-Roy studied his relations with medicine and science and Claude Mauriac, the novelist's son, published *Atmer Balzac*. Y. G. Le Dantec and Jean Massin added to our knowledge of Baudelaire. Pierre Descaves presented *Mes Goncourt*. E. Rideau interpreted Mauriac for Catholic readers and clarified Valéry's work in a logical exposition of his ideas. Armand Hoog and Claude-Edmonde Magny have been the outstanding additions to the list of young French critics.

In the field of art, architecture aroused much attention, as is natural in a country intent upon rebuilding its cities and ports: Maximilien Gauthier and André L. Donné among others illustrate this interest in their books on *Le Corbusier* and *L'Architecte dans la cité*. Foreign literatures were not neglected. Shakespeare was again studied in three learned volumes by F. Baldensperger (Montreal, L'Arbre), L. Cazamian (*L'Humour de Shakespeare*) and L. Lemonnier. Dickens was translated anew, and edited in a monograph by Alain. Two renderings into French of E. B. Browning's *Sonnets from the Portuguese* (one being by André Maurois at Brentano's). Curiosity for American literature is no less keen in France: a collection of Edgar Poe was launched; Melville was translated as well as O'Neill; M. Coindreau ably criticized Erskine Caldwell and Ernest Hemingway in *Les Oeuvres nouvelles* (N. Y., Maison Française), and William Faulkner enjoyed a vogue second to none other in France today.

The Essay. Essayists continued to be among the most versatile and lively writers of France. Alain's prestige has decreased during the recent war. Suarès has written little in the last year. Du Bos's *Qu'est-ce que la Littérature?* appeared posthumously. Gabriel Marcel, with *Homo Viator*, Julien Benda with *La France byzantine ou le triomphe de la littérature pure*, a crusade against the excess of literature in France, and Bernanos with *Réflexions sur le cas des Français* were the outstanding essayists of 1945. Duhamel, whose imaginative inspiration seems dried up today, mixed moral reflections and personal reminiscences in his best recent work, *Inventaire de l'Abîme*. Among the philosophers of earlier ages, Plato has attracted most attention (Koyré, *Introduction à la lecture de Platon* and Hugo Perls, *Plato, sa Conception du Kosmos*, the latter an important and original treatise); then Nietzsche, whom a gifted essayist, Georges Bataille, reinterpreted, Renan whose prophetic political views are enjoying new favor today (E. Biré, *Renan et l'Allemagne*, N. Y., Brentano's), and Kierkegaard and Heidegger. From the last two thinkers, the doctrine of Existentialism was evolved which has spread like wildfire among French youth. It is a doctrine of lucid and unflinching pessimism, which rejects any transcendent presence and even any rational explanation of the universe, but exalts man as a stoic whose obstinate courage and

action can alone give meaning to a tragically absurd fate. J. P. Sartre is the leading philosopher of the group. A. Camus, in *Le Mythe de Sisyphe* and Simone de Beauvoir in *Pyrrhus et Cinéas* have presented his views to a wider audience.

Drama. The year 1945 has fully revealed the vitality of the French drama through the ordeals of the war. Theatres were prosperous, and many of their offerings have been characterized by a fine artistic level. André Obey was appointed director of the dramatic department of the Ministry of Fine Arts: a new director for the Comédie Française was harder to find, as Brisson, Bauer, Jouvett declined the honor after Pierre Dux had resigned. A. Salacrou was appointed to rule over the Odéon. Claudel's *Soulier de Satin*, Sartre's *Huis Clos* and Mauriac's *Les Mal Aimés* were the chief plays continued from 1944. Georges Neveux was awarded the Grand Prix du Théâtre for *Le Voyage de Thésée*. Giraudoux was celebrated and edited in a special number of *Confluences* and in two works by J. Houlet and Claude-Edmonde Magny. Foreign plays were staged with conspicuous success, notably *Antony and Cleopatra* in Gide's adaptation, *King Lear* in Dullin's interpretation, Morgan's *The Flashing Stream*, Eliot's *Murder in the Cathedral* and even two English novels turned into French dramas, *Wuthering Heights* and *Tess of D'Urbervilles*.

Fiction. Existentialist novelists constitute the most talented and the most vocal group among the young. Two volumes of Sartre's trilogy came out: *L'Âge de Raison* and *Le Sursis*, while Simone de Beauvoir published *Le Sang des Autres* and Maurice Blanchot *Thomas L'Obscur. Aurélien*, by the former Surrealist Aragon, is a charming evocation of Paris and of youthful love. The chief hope of Surrealist fiction is Julien Gracq, whose *Un beau Ténébreux* is more fastuous and weird than convincing. *Smeteling*, by the former Dadaist Ribemont-Dessaignes, is equally strange and more markedly morbid.

The older novelists seem to have yielded the stage almost completely to newcomers. Colette's *Gigi* is a pale image of her former self. Jules Romain's *Men of Good Will*, Vols. 23 and 24, have found the curiosity of the readers, and probably the freshness of the author, sadly blunted. Simone Téry wrote a pleasant though superficial story on the Spanish Civil War, *Où l'Aube se lève*; the widow of Saint-Exupéry revealed a light and charming talent in *Oppède* (N. Y., Brentano's). Elsa Triolet, in her Prix Goncourt volume, appears as a remarkably fluent story-teller though lacking in depth of analysis and in dramatic force. André Chamson, on his return to civilian life, brought out a striking picture of life during the German occupation, *Le Puits des Miracles. Les Amitiés particulières*, by Peyrefitte, was praised as the best psychological study of the year on a delicate theme to which Proust, Gide, and Cocteau had accustomed many readers. *Le Solitaire* by Marc Blampain, which received the Grand Prix du Roman, *La Ronde des Survivants* by G. Bonnamy and Mouloudji's *En Souvenir de Barbarie* (the latter far inferior to the same author's *Enrico*) were among the other important works of fiction.

Poetry. The splendid flowering of robust poetry which had marked the years of struggle and revolt was succeeded after the liberation of the country by a period of stock-taking. Resistance poetry has now become the official poetry of France. Eluard is acclaimed by all as the chief poet of the hour (*Au Rendez-vous allemand*); the influence of his obstinately and delicately erotic images is clear

over the best-gifted among the younger poets, Alain Bosquet and Henri Mougin. Henry Michaux remains isolated and original in his impetuous flow of visions and metaphors (*L'Espace du dedans, Lobe des monstres, Au Pays de la Magie*). Francis Ponge has uncommon gifts (*Le Gymnaste, La Jeune Mère*) and may become, as interpreted by Sartre, the poet of the existentialist group. Jean Genêt, in *Notre-Dame des Fleurs*, maintains the fierce tradition of rebellion dear to the country of Rimbaud. Jean Marcenac, a former Surrealist, recently liberated from a German prison camp like Henri Mougin, shows great promise. The leader of orthodox Surrealism, André Breton, resorted to a very harmonious and ornate prose to celebrate love, woman, and the purification of man's imagination, in *Arcane 17* (N. Y., Brentano's). Another poet of great talent, Pierre Reverdy, who remained silent during the last few years, published the first volume of his complete works.

Critics and estheticians of poetry are as numerous as poets in an age and in a country where poetry has taken an acute consciousness of its purpose and technique. Jean Paulhan, in *Clef de la Poésie*, is an acute analyst of poetical language; Aragon published an Essay on *Les Circonstances de la Poésie*; Maurice Nadeau's *Histoire du Sur-réalisme* is the best historical account of that movement published thus far. Among the poets of the past to whom our contemporaries turn most fervently, thus revealing their own affinities, are Maurice Scève (edited by Béguin), Charles Cros (*Poèmes et Proses* published at Gallimard's), Tristan Corbière for whom 1945 marked the hundredth anniversary, Pierre Louys edited by Y. G. Le Dantec and edited by A. Cardonne, and Mallarmé, whose complete works in prose and verse were published by Henri Mondor in the *Pléiade* edition. St. John Perse's *Anabase* appeared in a new edition at Brentano's and Claudel's *Cinq Grandes Odes* at Montreal (Fides).

Conclusions. The first year of freedom from oppression found French literature buoyantly proud of its fine record in the Resistance movement and having lost none of its prestige in France or abroad. Variety, effervescent vitality, high artistic achievement were its distinctive features. A cleavage seems to have been dug deep between the younger writers and the older masters who were the chief glories of French letters before 1940. Claudel, Gide, Martin du Gard, Duhamel, Mauriac seem today to belong to another age; the new generation of writers recognizes no masters among its elders. Malraux, Aragon, Eluard, Sartre, and Paulhan are its most respected leaders. No dominant note is struck by such divergent and individual talents, but a greater seriousness than was noticeable after 1919 characterizes the writings of 1945. Philosophical preoccupations occupy the first place even in the minds of novelists and poets. Their attitude to life and the world is tinged with tragic pessimism, for it spurns the illusions which had lulled their predecessors into complacency; but it is an active pessimism, which is determined to find new reasons for living through its own lucid search for a new truth. Finally, the majority of these writers refuse to be isolated from life. They have been steeled in the fire of action; they write in newspapers, take part in political struggles, are keenly conscious of social and international problems. Their literature is not the decorative game of esthetes, but an earnest endeavor to guide men to know themselves and the world better, and to change the world and themselves if possible.

HENRI PEYRE.

FRENCH NORTH AFRICA. Consists of the northwest corner of Africa, except for certain small Spanish territories (see SPANISH AFRICA), and is known to the Arabs as "el Moghreb"—"The West." Its territory is divided among Algeria (847,500 sq. mi.), French Morocco (153,870 sq. mi.) and Tunisia (48,300 sq. mi.).

Government. Northern Algeria is for most purposes treated as an integral part of France. It is divided into three departments (Oran, Algiers, Constantine) in which the adult French population elects representatives to the legislative bodies in Paris. The over-all authority is exercised by a Governor-General who is responsible to the Minister of the Interior in Paris. Natives are represented only on local bodies such as the *Délégations Financières*. The number of Moslems who enjoy French political rights is quite small, but will probably be greatly increased in the near future (see EVENTS). South of the three departments, in the Sahara, lie the four Territories of the South, which form a separate colony under military command.

The empire of Morocco is theoretically an absolute monarchy, but in reality it is a French Protectorate where power is exercised by the French Resident General, who is also the Minister of Foreign Affairs and is responsible to the Ministry of Foreign Affairs in Paris. Under the Resident General is an extensive administration, French in its higher levels but with increasing numbers of natives in the local areas. In some parts of the interior military, rather than civil, administration has been the general rule, since these areas have been "pacified" only recently. The capital of the French regime is at Rabat, though the Sultan occasionally resides in one of the other historic capitals—Fez, Marrakesh, and Meknes.

Tunisia, like Morocco, is a French Protectorate and thus under the direction of the Foreign Ministry in Paris. An hereditary Bey nominally rules over the Regency, but the actual administration is under the control of a French Resident General who is also the Minister of Foreign Affairs for Tunisia. He presides over a cabinet in which some of the departments are headed by Tunisians. Local affairs, both judicial and executive, are to a considerable extent under the administration of native officials. The capital is at Tunis. There are no over-all representative institutions in either Morocco or Tunisia and, being Protectorates, they are not represented in the legislative bodies of Paris.

Events, 1945. Conditions in North Africa continued to be unfavorable. The economy of the country had been disrupted by war. The Government in Paris was so immersed in the problems of the homeland it could not give proper attention to the overseas territories. Consumer goods of all sorts, notably clothing and food, were very scarce. To cap the climax came another year of drought. By early summer near-famine conditions prevailed in some regions and the Paris authorities found it necessary to have some of the American wheat shipments bound for France rerouted to North Africa. Figures for the 1945 harvest, available in July, showed a wheat crop of only 1,300,000 tons, compared with the normal production of 4,500,000 tons. To help meet the situation an attempt was made to cut the bread ration from 300 to 250 grams a day, but this had to be abandoned when riots broke out.

Out of this explosive situation bloody riots erupted on V-E Day at Sétif and neighboring centers in eastern Algeria. News of these outbreaks was slow in filtering out through the local censorship to the world at large. On May 11, the

French Cabinet, in announcing measures to allay unrest, indicated that the scarcity of grain was "responsible for present difficulties." Political causes seem also to have entered into the picture, including events in the Levant (see SYRIA AND LEBANON). Alarmist reports gave the casualties arising from the outbreaks as over 10,000, which were said to have resulted from a nine-day campaign in which airplanes and artillery were used. Official French statements put the figures much lower, the Minister of the Interior conceding only 90 Europeans killed and 150 wounded, and 1,500 dead among the natives. Out of the 50,000 who were said to have rioted on May 8, there were 2,400 arrested in reprisal. On June 16 thirteen natives were condemned to death by a military court for their part in the disturbances.

The situation failing to improve, the French Government late in June sent its Minister of the Interior, M. Adrien Tixier, to Algeria to investigate on the spot. On July 3 he felt able to state that calm had been reestablished in the Department of Constantine. He also revealed plans for "the integration of Moslems into the French community" by giving them new political and social guarantees, including a change in the manner of Algeria's representation in the National Assembly and the extension of the franchise to 800,000 Moslems. The progressive assimilation of Algeria into the French scheme of things was the solution envisaged for this region during discussions in the Consultative Assembly early in the summer.

The municipal elections of August 6 in Algeria indicated a victory for the Left, which won 31 seats with five going to the Conservatives and fifteen to Moslem candidates. The restricted franchise and the boycott preached by the outlawed nationalist parties robbed the election of any deep political import.

The resumption of private trade between the United States and French North Africa was permitted after July 1, thus making it possible for much-needed manufactured items not obtainable from France to be imported from America. An immediate market for \$100,000,000 worth of American goods, exclusive of wheat, was foreseen by M. Cardin, Director of French North African Economic Affairs.

The state of economic affairs in Morocco and Tunisia was similar to that in Algeria. In Tunisia some of the cities, notably Bizerte, were being rebuilt almost from the ground up. Vineyards, olive groves and grain fields were still feeling the effects of passing armies. In Morocco, where the drought had been severe, there was the paradox of large herds of livestock, due to the producers' inability to effect normal exports.

On March 15 the High Court of Justice in Paris sentenced Admiral Jean-Pierre Esteva, Vichyite Resident General in Tunisia, to life imprisonment for treason and intelligence with the enemy while occupying that post in 1942-43.

In mid-June the Sultan of Morocco, Sidi Mohammed, went to Paris to be fêted and to discuss *inter alia* the status of Tangier (see TANGIER). The Bey of Tunis, Sidi Mohammed el Amin, arrived in Paris a month later in time to participate in the celebration of Bastille Day. During the year the United States Army used Casablanca as one of the principal centers from which it despatched soldiers home by air.

The Population. The population of Algeria in 1936 numbered 7,234,684, of which nearly one million were European. Only a tenth of Algeria's inhabitants live in the vast desertic Territories of the

South. Arabic is the predominant language spoken by the Moslems, with Berber dialects found in certain districts. There are also Jewish communities in the cities. The education of the natives is provided largely by Moslem schools, which are attended by only a small part of the population. For the Europeans there is the regular French scholastic hierarchy, culminating in the University at Algiers.

In 1936 the population of the French Zone in Morocco was 6,298,528, of which 5,874,888 were native Moslems, 161,312 native Jews, 173,533 French, 59,058 other Europeans. (All these figures have probably undergone considerable change during the last decade.) The native population consists largely of Moslemized Berbers and the descendants of the Arab invaders of the early medieval period. There has also been a considerable intermixture of Negro blood imported across the Sahara. Under French rule the major cities of Morocco have grown rapidly, until today Casablanca has a half million inhabitants, while Rabat, Fez, Marrakesh, and Meknes all exceed 100,000. Berber is still used by a considerable portion of the natives, especially in the interior. Along the coast, however, Arabic has become the common tongue. In general the educational facilities available for the Moslems are limited and outside the populated centers are provided mostly in religious schools. There is, however, the noted Kairoween University at Fez. For the European population there are a number of primary and secondary schools. At Rabat there is also the Institut des Hautes Etudes Marocaines.

In 1936 the population of Tunisia was 2,395,623 Moslems, 59,485 Jews and 213,205 Europeans. Included in the latter figure were 108,068 French and 94,289 Italians. However, these figures are deceptive since a great many of those counted as French are of Italian ancestry. The Moslems are largely Arabic-speaking, the principal exceptions being found among certain tribes in the south. The European population is almost entirely Roman Catholic. Education is provided partly by religious and other private funds, and partly by the Government. As elsewhere in North Africa, the European population is much better educated than the mass of the natives.

The Country's Economy. In all three countries agriculture is the principal occupation of the natives. The chief crops are wheat, barley, oats and other cereals. Tobacco is raised extensively in Algeria. Olive oil is produced in large quantities, notably in Tunisia, where in the south large tracts are covered with cultivated olive groves. Cork and almonds are produced in Morocco, while citrus and other fruits are widely cultivated in the warmer zones of all three countries. Wine is an important product in Algeria and Tunisia. Sheep, goats and cattle are raised in large quantities throughout French North Africa. Fisheries are found along the coasts and provide food both for local consumption and for export.

Algeria produces important amounts of iron ore (2,325,500 metric tons in 1937), phosphate rock (566,571 metric tons in 1937), lead and zinc. Morocco's principal mineral product is phosphate (1,447,327 tons in 1938), while zinc, lead, iron ore and manganese are also extensively mined. Phosphate rock is also the principal export mineral of Tunisia (1,608,045 metric tons in 1939), with iron ore coming second (764,731 metric tons).

By and large the manufacturing industries of French North Africa are still in a rudimentary stage—a fact which greatly handicapped the use

of that region as a base for the Allied invasion of southern Europe in 1943. Present plans call for an acceleration of the process of industrialization.

Figures for foreign trade have not been available for a number of years, but those for the pre-war years reveal that by far the lion's share went to France. Internal communications are provided by a railroad network that extends all the way from the Gulf of Gabes to Marrakesh. Altogether there are over 5,000 miles of railroad, supplemented by several thousand miles of improved highways. Modern ports exist at such places as Casablanca, Oran, Algiers and Tunis, and there are naval bases at Mers-el-Kebir and Bizerte.

ROBERT GALE WOOLBERT.

FRENCH OCEANIA. The French possessions in the eastern Pacific, comprising several groups of islands. The principal groups are: Society, Marquesas, Tuamotu, Leeward (Îles sous le Vent), Gambier, Austral, and Rapa Islands. Clipperton, an island 670 miles southwest of Mexico has been included in French Oceania. Tahiti (600 sq. mi.; pop. 19,029 in 1936), of the Society group, is the main island. Total area, 1,520 square miles. Total population (Nov. 1, 1941), 51,221. Capital: Papeete (on Tahiti), 11,614 inhabitants in 1941. Chief products: copra, vanilla beans, phosphate, and mother-of-pearl are the chief products. Foreign trade (1941): imports 53,429,000 francs; exports 124,583,000 francs. The budget (1941) was balanced at 28,800,000 francs. The Government is under the control of a Governor, assisted by a private council and an assembly of financial and economic delegations. Governor, Colonel Orselli.

FRENCH WEST AFRICA. A vast territory comprising the administrative divisions indicated in the following table:

Colony	Sq. Mi.	Pop. (1941)	Capital
Dahomey	43,232	1,424,220	Porto-Novo
Dakar*	60	165,188	Dakar
French Guinea	96,886	2,117,705	Conakry
French Sudan	590,966	3,794,270	Bamako
Ivory Coast	184,174	4,047,041	Abidjan
Mauritania	323,310	866,853	—
Niger	499,410	1,944,190	Niamey
Senegal	77,730	1,723,068	St. Louis
French West Africa	1,815,768	15,582,535	Dakar

* Including dependencies. † The lieutenant governor of Mauritania resides in St. Louis, Senegal.

Togo, a narrow mandated territory lying between Dahomey and the Gold Coast with an area of 21,893 sq. mi., is included under this heading, though administratively it is separate from French West Africa.

Government. For French West Africa as a whole there is a Governor-General, assisted by a Council. Each colony, including the Circonscription of Dakar et Dependences, has in addition its own Governor. The Governor-General supervises the administration of these governors, but leaves to them the details of local government. There is a general budget covering certain matters of common interest to all of French West Africa; but there are also separate budgets for each of the colonies. The financial estimates for 1943 showed a budget balanced at 3,017,818,000 francs. Senegal, being one of the older French colonies, has been represented in the Parliament at Paris by an elected deputy.

Very few of the natives are French citizens (except in and around Dakar) possessing the political rights associated with that status. However, the proposals of the French Provisional Government for a federal union between France and her

colonies provide for a greater equalization of political status among all the inhabitants of the French empire. The capital is at Dakar. Togo is a Class B Mandate; its capital is Lomé.

Events, 1945. The war had cut off the country's normal flow of imports, thus creating a great scarcity of clothing and all sorts of manufactured goods. Since it would take some time for France to rehabilitate her industry sufficiently to supply this market, her West African possessions had to look to the United States for relief. This was provided by a decision of the United States Government, reported in mid-January, to permit the resumption of private trade with French North and West Africa.

The war had also disrupted the normal flow of exports, thus causing West African products to accumulate. Early in the year some 120,000 tons of coffee and 60,000 tons of cocoa from the Ivory Coast and Dahomey were awaiting transport to France. The peanut crop, the country's largest export, was only one-half the normal volume due to various causes, natural and political.

In February the French Cabinet revealed ambitious plans for the construction of a great military, naval and air base at Dakar to serve the interests of the French empire as well as of the new collective security under the San Francisco Charter. The government also sent out three town-planning experts to replan the city of Dakar for an eventual population of 500,000 inhabiting an area equal to that of Paris. Meanwhile work went ahead on the extensive irrigation scheme started under the Vichy regime on the Niger above Timbuctoo. This project, in which lessons learned from the T.V.A. in America were used, provided for the construction of new villages, the setting-up of marketing co-operatives and in general raising the natives' standard of living. Surveys were also conducted to show how transport could be speeded up between French West Africa and Morocco by way of the Sahara.

People. Out of the 16,000,000 inhabitants only some 25,000 are Europeans. The natives are largely Sudanese Negroes, but with strong Hamitic influences in many areas of the Sudan and in the Sahara. These elements are the results of migrations from North Africa and the Nile Valley, which also introduced the Mohammedanism professed by many of the inhabitants in the drier parts of French West Africa. The southern zone, lying in the belt of tropical rain forests, is largely pagan except where Christian missions have made converts.

Elementary schools are small in number and are provided partly by the government and partly by missionaries. The natives are encouraged to learn French, which is useful for obtaining employment in the government service or in European-owned enterprises. By and large the French authorities appear less concerned to preserve the native's culture and tribal institutions than are the British in their West African colonies. The William Ponty Normal School at Dakar provides training for various professions. In the same city is the French Black Africa Institute for the study of African culture and languages.

The Country and Its Economy. The climate, which is hot and wet on the Guinea coast, becomes progressively drier to the north. In terms of vegetation this means that the coastal forest shades off into the open savannas of the Sudan and finally into the world's greatest desert—the Sahara. Occupations are conditioned by these climatic circumstances. In the south the important products are cocoa, coffee, palm oil and kernels, tropical fruits and rubber. In the drier regions they are cotton, cereals,

peanuts, cattle, sheep and goats, and hides and skins. Figures illustrating the volume of exports are (for 1942) peanuts, 81,485 tons; cocoa, 28,594 tons; palm kernels, 41,669 tons; coffee, 19,984 tons. Interesting native industries are to be found in Dahomey and Togo, and to a lesser extent in some of the other colonies.

There are over 2,500 miles of railway and many thousands of miles of usable roads; a considerable section of the middle Niger River is navigable by shallow-draft vessels. The principal ports are Dakar, Conakry, Abidjan-Port Bouet and Cotonu. In 1942 the total value of imports was 1,821,430,000 francs, and of exports 1,451,628,000 francs.

ROBERT GALE WOOLBERT.

FRIENDS, Society of (Quakers). A religious society founded in England by George Fox (1624–90) which stresses the direct spiritual guidance of the Holy Ghost, called the Inner Light, repudiates war, a paid ministry, and the outward observance of the sacraments or any religious ritual. There are four denominations in the United States, of which the Society of Friends (Orthodox) is the oldest and largest, and the Religious Society of Friends (Hicksites), a liberal group, is equally active. Orthodox headquarters, Richmond, Ind. For statistics see RELIGIOUS ORGANIZATIONS.

GENERAL ACCOUNTING OFFICE. An agency of the U.S. Government, created independently of the other agencies, to secure the uniform settlement and adjustment of all claims and accounts in which the United States is concerned. Comptroller General of the United States in 1945: Lindsay C. Warren.

GENERAL EDUCATION BOARD, The. An institution incorporated by an act of Congress in 1903, with the stated object of promoting education within the United States of America without distinction of race, sex, or creed. The present program of the Board is restricted almost entirely to the support of educational work in the southern states.

The Board is empowered to spend the income and the principal of its funds. Among its appropriations in 1945 were: \$70,000 to the University of Alabama for its public administration program, of which amount \$30,000 is for the support of the Bureau of Public Administration and \$40,000 for advanced regional fellowships in public administration; \$95,000 to the Phelps-Stokes Fund, New York City, toward a program for the Negro rural church, including the training of Negro rural ministers; \$24,700 to the George Peabody College for Teachers, Nashville, Tennessee, toward support of a Regional Materials Service in connection with the movement to have education play a more vital role in the development, understanding, and utilization of the natural and institutional resources of the South; \$76,900 to be apportioned among the universities of North Carolina, Arkansas, Virginia, the American Council on Education, Alabama State Department of Education, and Alabama Polytechnic Institute, for preparation and testing of educational materials dealing with the natural and other resources of the South; \$19,470 to the University of Kentucky toward a study of the actual and potential utilization of the forest resources of the Eastern Kentucky highland region; \$45,000 to the Southern Highland Handicraft Guild and \$25,000 to the University of Tennessee toward the support of a program of craft education in the southern highlands; \$20,000 to Harvard University for visiting fellowships in the Graduate School of Business

Administration for faculty members of Southern institutions; \$30,000 to the Nashville School of Social Work toward its support for a three-year period; \$25,000 to Our Lady of the Lake College, San Antonio, Texas, toward the support of its Graduate School of Social Service; \$25,000 to the United Negro College Fund, Inc., toward the raising of a fund for the maintenance of privately supported institutions for Negro education; \$15,770 for salaries and traveling expenses of State agents for rural schools for Negroes in the State departments of education of southern states; \$41,000 to the Georgia School of Technology toward the purchase of scientific instruments and equipment; \$25,940 to University of Chicago for study and development of new-type verbal tests of general intelligence applicable to all children irrespective of social and cultural status; \$15,000 to the Alabama Polytechnic Institute toward support of a program in rural community development; \$10,000 to Virginia State College for Negroes toward a project for community development for Negroes; \$14,000 to the Mississippi State Department of Education toward support of summer training courses for white and Negro teachers and health workers in connection with the development in public schools of a coordinated program of health education and health service; and \$6,200 to North Carolina State Department of Public Instruction, for a similar purpose.

The executive officers during 1945 were Walter W. Stewart, chairman of the board of trustees; Raymond B. Fosdick, president; Albert R. Mann, vice-president and director; William W. Brierley, secretary; Edward Robinson, treasurer; George J. Beal, comptroller; Thomas M. Debevoise, counsel; Chauncey Belknap and Vanderbilt Webb, associate counsel. Offices: 49 West 49 St., New York City, N. Y.

GENERAL LAND OFFICE. An Office of the U.S. Department of the Interior which supervises the survey, management, and disposition of the public lands and the minerals therein. During the war the Office made large tracts of land available for military uses. Commissioner: Fred W. Johnson.

GEOGRAPHICAL NAMES, U.S. Board on. A branch of the U.S. Department of the Interior, successor to the U.S. Geographic Board, which is the official authority on the use of geographic names by the Government. Director: Meredith F. Burrill.

GEOLOGICAL SURVEY. Funds aggregating 12½ million dollars, about one-half of which were derived from direct appropriation by Congress and the other half from cooperative agreements with other Federal agencies and with States, counties, and municipalities, were made available for the Geological Survey's work in 1945. These monies were wisely spent in war-expanded investigations of mineral and water resources, land classification, mineral leasing, and topographic mapping. The resulting reports and maps, often prepared at the urgent request of the fighting forces, contributed not only to the success of arms but, by the development of new methods and techniques, to the restoration of a sound national economy in the difficult years ahead. Commercial supplies of mercury, chromium, vanadium, tungsten, manganese, etc., reached a new low in 1945, while reserves of petroleum were taxed to the utmost and once bountiful pools in the ground were actually endangered by far too heavy withdrawals. It was the Geological Survey's mission to point the way

to replenishment by locating new deposits, particularly of the metals and petroleum, and to advise concerning their recovery and the utilization of low-grade ores that were known to the geological profession but were little used in the days of plenty. Thus the Geological Survey carried on its vital work, mostly on the home front but not without timely participation within the zones of war.

It was not until the closing months of the war that the Military Geology unit, organized at the outset of hostilities at the request of the Army Engineers, became known to the general public. Its studies of foreign terrain were expanded markedly in 1945, when the nation concentrated its industrial as well as its military might on an early conclusion of the war. Fifty members of the unit were dispatched to the theater of operations either as scientific consultants in combat zones or on assignments connected with operational intelligence. Concurrent with those studies the Survey continued its cooperative investigations of mineral deposits in other American Republics. Under the auspices of the State Department and the Interdepartmental Committee for Scientific and Cultural Cooperation, thirteen different mineral commodities were studied in Mexico, Cuba, Chile, Brazil, the Dominican Republic, and Haiti. In the continental United States, mineral fuels investigations looked primarily to obtaining geologic data on additional supplies of petroleum and appraising the potentialities of substitutes for liquid petroleum, even though the Survey confidently expects to find new sources of supply. The likely sources of substitutes in large quantity are oil shales and the low-rank coals, especially those of the Rocky Mountain States. In the field of metallic minerals emphasis was placed on fundamental geologic studies of the principal ore-producing districts in order to provide a proper foundation for future exploration. At the end of the fiscal year field work in 21 major districts was under way, and some of the work had already produced worthwhile results. The project at San Manuel, Ariz. is an example; there the Geological Survey cooperated with the Bureau of Mines in a drilling program that indicated copper reserves of possibly as much as 64 million tons of ore averaging 0.8 to 0.9 per cent of copper, which is a small fraction of a per cent below the 1.0 to 1.1 per cent copper ores worked in large volumes in Utah and Arizona. Many smaller projects, involving work on eight of the so-called strategic minerals, were completed in 1945. Bauxite investigations, begun in 1941 and carried on jointly with the Bureau of Mines, were practically concluded during the year. They increased, by about 10 million tons of ore, the known national reserves of approximately 75 million tons. Fluorspar production also gained impetus from the Survey's field work in 15 States, while investigations of the other non-metallic deposits, such as talc, clay, and corundum, added to the Nation's storehouse of mineral reserves. In this last connection, the work of the Survey's Alaskan geologists deserves special mention, for their investigations of a large number of mineral deposits in the Territory have added immeasurably to the Nation's mineral wealth. During the 1944-45 field season their efforts were directed chiefly to studies of petroleum, coal, quicksilver, copper, tin, and zinc, 19 projects in all having been brought to successful conclusion. Along with these studies continued the work of the specialized unit that compiles the aeronautical pilotage maps and charts from photographs furnished by the Army Air Forces.

Through the network of its numerous field offices located at strategic points throughout the United States, the Survey in 1945 eclipsed the work of all previous years in the investigation of surface and underground waters, more than one-third of the overall cost of which was borne by States and municipalities. Other Federal agencies, including the Office of the Chief of Engineers, Mississippi River Commission (War Department), Bureau of Yards and Docks (Navy Department), provided nearly a million dollars for water resources work that could not be financed by direct appropriation or included in cooperative programs. Records of the stage, quantity, or availability of surface waters were collected at about 5,600 gaging stations distributed throughout every State of the Union and the Territory of Hawaii. These records serve as the basis for constructing, operating, and administering municipal and industrial water supplies, irrigation systems, power plants, flood-control works, and the like. Ground-water investigations, relating to water from which wells and springs are supplied, covered the source, occurrence, quantity, and head of these waters; their conservation and replenishment; their availability and adequacy for domestic, industrial, irrigation, and public supplies, and as watering places for livestock; and the methods of constructing and utilizing wells and of improving springs. In 1945 there were periodic investigations of water levels or of artesian pressure in about 7,000 observation wells. A study of these records will aid in determining the depletion of underground waters caused by the numerous war industries and other war establishments that obtained their supplies from wells, and in providing against possible shortages. Many of the engineers in ground-water work were also assigned to overseas combat zones, in military or civilian capacity, for water supply work. Nearly 7,000 analyses of water samples were made in the Survey's laboratories, many of them representing studies of water supplies for Army and Navy establishments and for munition plants and housing developments.

The Survey's principal mapping unit, the Topographic Branch, gave its major energies to the production of maps for the War Department. Prepared from aerial photographs in the Arlington, Va., Chattanooga, Tenn., Rolla, Mo., and Sacramento, Calif., offices of the Survey, the maps in manuscript form covered thousands of miles of territory at home and abroad but chiefly beyond the seas. More than 64,000 square miles of foreign soil were mapped during the year, about 60,000 of them before V-E day. Similar maps of areas in the United States published during the year included 183 maps of regions designated by the War Department as strategic. A total of 586 quadrangles were thus covered by the Survey between the beginning and near-end of the war. Work on the millionth-scale map, a project begun years ago by Great Britain, Russia, the United States, and other nations for making a map of the world on a uniform scale, proceeded to the point of preparing for publication Sheets H-14 (Austin), H-15 (Mississippi Delta), I-17 (Savannah), I-18 (Hatteras), K-10 (Mt. Shasta), K-17 (Lake Erie), and L-10 (Cascade Range). Each sheet of the millionth-scale map comprises six degrees of longitude and four degrees of latitude, or an area somewhat smaller than that of the State of Wyoming. Continuing its work on the Transportation Map of the United States, the Survey published during the year 14 sheets covering areas in New Mexico and had others of parts of North Carolina ready for

publication. Topographic surveying was done in 35 of the States. The work was carried on in cooperation with 19 of the States and with the Tennessee Valley Authority. Special projects included 10 maps for use in connection with Survey investigations of strategic and critical minerals; 16 in furtherance of flood-control work by the Army Engineers; and five for irrigation and reclamation projects of the United States Bureau of Reclamation.

In mineral classification matters submitted to the Geological Survey for technical advice, the records showed an increase of 20 per cent in the number of cases completed. More than 13,000 cases, each involving one to many geologic determinations, were acted on during the year. In addition, initial or revised definitions of the known geologic structure of seven producing oil and gas fields were prepared and promulgated, increasing the net area so defined in nine public-land States to 1,888,328 acres on June 30, 1945; geologic appraisal was made of 80 unit-plan submissions; and 53 special reports were rendered to the General Land Office on new discoveries of oil or gas on or adjacent to Federal lands, including 22 applications for the royalty benefits accorded by law for the discovery of new oil or gas fields or deposits during the national war emergency. Water and power classification work added 110,278 acres of power-site reserves in 22 States and Alaska; maps representing 180 miles of stream valley and 18 dam sites; final action involving hydraulic determination on 267 cases received for report from Departmental sources and from the Federal Power Commission; and water-power classification on 1,939 cases, which also involved mineral classification. A marked increase was also recorded in the Survey's mineral lease supervision on public lands. More than 7,000 oil and gas properties were under supervision at the end of the fiscal year, aggregating 4,596,053 acres in 20 States and Alaska, an increase of 32 per cent in the number of properties and nearly 48 per cent in the average acreage under supervision at the close of the previous year. Drilling on public lands included the spudding of 566 wells and the completion of 626 wells, 440 of which were productive of oil and gas and 186 barren. The production of potash was maintained at a high level, and sodium plants ran at maximum capacity to meet war-induced demands for chemical products used in the manufacture of bombs, percussion caps, shells, smokeless powder, etc.

Particularly active during the year were the Survey's shops that equip the scientific and technical staffs. In addition to their regular job, these skilled mechanics made a number of unusual devices that materially aided important war work. There was the Graph Subdivider, for example, used to convert graphical records of the gage heights of rivers into figures representing the daily mean discharge. A Tick Graduator, which divides distances between degree lines on map grids into 60 equal parts representing minutes and cuts the graduations (called "ticks") through the photographic emulsion on glass plates, also took its place among the long list of precision instruments made by the Survey; and then came the Stereo Plotter, which portrays on maps the contour lines derived by the floating dot method from vertical aerial photographs.

Publications, too, appeared in greater number than in 1944. In addition to the regular series of professional papers, bulletins, and water supply papers, there were a number of miscellaneous publica-

tions and a variety of maps, noteworthy among which were the preliminary maps of the oil and gas investigation series. These were the result of the program of regional geologic studies begun in July 1943 in many States where there were possibilities for the discovery of new supplies of petroleum and natural gas. Released at a rate of approximately four each month, 35 preliminary maps and nine preliminary charts in the oil and gas and war minerals investigations series had appeared at the close of the fiscal year. A total of 2,396,731 publications of all types were received and 1,228,424 were distributed.

JULIAN D. SEARS.

GERMAN LITERATURE. At the moment of writing, a few months after final defeat of Nazi Germany, German literature is still in a state of utter chaos. Toward the end of the war German literary activity had, with the exception of a handful of privileged Nazi writers, been totally suppressed. Managers of many of the famous German publishing houses disappeared into concentration camps; other houses were bombed out; in nearly every case libraries, bookshops were shut down or destroyed, or stock burned. Now, after the collapse, it is clear that Nazism added nothing of value to German literature. If a new literary generation exists, their manuscripts have not yet been found.

According to early reports, a few of the better-known writers were able to save their lives and are now working for the occupation forces, men like Ernst Glaeser, W. Sueskind, E. Penzoldt. Gerhart Hauptmann, far over 80, is living in Agnetendorf and has offered his spiritual and moral support to the Fatherland—as he did to William II, to the Weimar republic, and to Hitler. A newly founded Association for the Reconstruction of German Culture is headed by the ex-expressionist Johannes R. Becher who, like the playwright Friedrich Wolf, has returned from a long period of exile in Soviet Russia to Berlin. German theaters immediately started to revive pre-Nazi authors, like B. Brecht, Carl Zuckmayer, W. Hasenclever (who committed suicide in France). The only sincere and impressive voice so far has come from Heidelberg, where the philosopher Karl Jaspers opened the university with a very moving speech. Within recent weeks certain German publishing houses received licenses to renew their activities. The first was the small firm of H. Meister (in Heidelberg), known only to a few connoisseurs of sophisticated poetry. In the American zone (Wiesbaden) and in the British zone (Hamburg) S. Fischer, Goverts, Brockhaus, Eugen Diederichs, and the distinguished Insel Verlag followed. Inexpensive translations of American writers, contracted for by the U. S. Government under standard conditions, are being distributed in the American zone. The only surviving German publishing-house-in-exile, on the continent, the Bermann-Fischer Verlag in Stockholm, has been active throughout 1945, in spite of transportation difficulties. Considerable stocks of German books, apparently lost or seized, have been recovered in the Netherlands and are now in great demand.

1945 brought the seventieth birthday of Thomas Mann, and in this connection, he made a remarkable speech on "The Germans" before the Library of Congress, to which he is Consultant for German Literature. On the occasion of Mann's birthday there was a special issue of the *Neue Rundschau*, a magazine which before Hitler was the best known literary organ in Germany. The *Neue Rundschau* will from now on appear (Bermann-Fischer, Stock-

holm) as a quarterly, its first regular issue contains contributions by Thomas Mann, T. S. Eliot, Lise Meitner (the atom scientist), J. Maass, O. Loerke, Roosevelt, Zuckmayer and Gumpert. It will soon publish some impressive verse written by Albrecht Haushofer (the son of the geopolitician), during his long stay in Nazi prisons and concentration camps.

Thomas Mann, after the Nazi collapse, became involved in a controversy with W. von Molo, head of the German Poet's Academy, who had invited him to return to Germany. Mann declined, referring, in his answer, to his sense of loyalty as a recent American citizen. A special American edition of his *Moses* appeared in 1945; and Mann's works in German have now been completely republished in Stockholm. His new novel about a modern German composer, a study of art and insanity, is almost finished.

Some of the German writers in exile have died—Franz Werfel and Bruno Frank in Los Angeles, Richard Beer-Hofmann, the Austrian poet, in New York. Werfel's last work, *Stern der Ungeborenen* (Star of the Unborn), has just come out in Stockholm: it is the story of a gigantic Utopia of a world, a hundred thousand years from now, the vision of a physical, technical and spiritual transformation of the cosmos. Four philosophical and religious essays, "*Zwischen oben und unten*" (Between Above and Below), have likewise appeared in Stockholm. Bruno Frank's last novel *Die Tochter* (The Daughter) was published in Stockholm (in 1943 in Mexico). Lion Feuchtwanger's final or latest Josephus novel *Der Tag wird kommen* (The Day Will Come) was published in German (Stockholm). Feuchtwanger is now working on a novel about Benjamin Franklin. Leonard Frank, with two unpublished novels, has come to New York from Hollywood where his post-World War I novel, *Karl und Anna* is now being filmed by MGM. Alfred Doeblin has gone to Baden-Baden to serve as an official with the French occupation authorities. He has finished a large novel about Germany after World War I. Annette Kolb has returned to France. W. Speyer has finished a large novel about Berlin, from the Hohenzollerns to Hitler.

There have been recent editions in both German and English of an autobiographical novel by a younger German writer, Joachim Maass, now a teacher at Mt. Holyoke, *Das magische Jahr* (The Magic Year). Furthermore, of Carl Zuckmayer's novelette *Der Seelenbräu* (the author now leads a rustic life in Vermont); of C. Weiskopf's *Himmelfahrtskommando* (a Czech-German, living in New York); and of Vicki Baum's *Kautschuk*. Alfred Neumann (who lives in Hollywood) recently had published an excellent novel in English based on the rebellion of the seven Munich students who were later executed by the Nazis. H. Kesten's new novel, *The Twins*, will soon come out in New York—published by L. B. Fischer, which issued Martin Gumpert's *Hahnemann, the story of a medical rebel*. E. M. Remarque's new novel about exiles in Paris has been serialized in Collier's and has already been chosen as a "Book of the Month" selection. Hauser's *The German talks back*, a superficial political analysis of an ex-pro-Nazi, has been a highly questionable venture of author and publisher (Holt). Some sophisticated literary excitement has been provoked by the simultaneous German and English editions of Hermann Broch's new novel, *Virgil's Death* (Der Tod des Vergil). The publisher, Pantheon (the former Kurt Wolff Verlag), has shown distinctive taste and publishing instinct in a great number of European literary

and art works hitherto unknown to the American reader. In a related field, W. W. Norton continued his valuable publication of R. M. Rilke's work. F. Hayek, a former Viennese economist, has caused quite a stir in this country with his conservative-liberalistic, anti-socialistic study *The Road to Serfdom*.

A few experimental publishers of German books have sprung up in New York, Los Angeles, Mexico, Chile and Argentina, such as O. M. Graf, *Der Quasterl* (five short stories); New York, Aurora: F. C. Weiskopf, an anthology, *Die Unbesiegbaren* (The Invincibles); Ernst Bloch, *Freiheit und Ordnung* (Freedom and Order), outline of social utopias; F. Bruckner, *Simon Bolivar* a play; New York, F. Krause: J. Urzidil's *Der Trauermantel* (Coat of Grief); K. O. Paetel, a book about the German poet E. Jünger; Walter H. Perl, an essay on Thomas Mann. In Los Angeles, Werfel published *Die schönsten Gedichte*; in Mexico: Paul Mayer brought out *Exil* (Poems); P. Merker: *Germany—to be or not to be*; L. Renn: *Adel im Untergang* (Aristocracy in Decline). In Buenos Aires: Doris Dauber, *Eine Nacht ein Leben* (A night a life); C. A. Friedenreich, *Richard Wagner*; A. Siemsen, *The Tragedy of Germany*.

Effort has been devoted to reprints of popular German literature: In Stockholm Bermann-Fischer has republished most of the works of Werfel, Stefan Zweig, Thomas Mann, Hugo von Hoffmannsthal. In this country there have been new editions of dictionaries (Langenscheidt, Cassell), Ganghofer, Erich Kaestner, W. Busch, Rilke, anthologies of German poetry, and a number of highly specialized scientific works which were important to the war effort. Of B. Fischer's German pocket-book editions, for German prisoners of war in American prison camps, twenty-four volumes were published and immediately sold out (among them St. V. Benet, *America*; Wendell Willkie, *One World*; Hemingway, Werfel, Conrad, L. Frank, Th. Mann, Remarque, Heine, Saroyan).

Some mention should be made of a peculiar literary-legal situation that has arisen. According to U. S. law, American copyright is not granted to original works by American authors, printed outside of the U. S. Since many German writers are now American citizens, their original German editions would not be protected if first published in a foreign country. Attempts are being made to modify this legislation.

MARTIN GUMPERT.

GERMANY. A former Federal republic of Central Europe, wholly occupied by Allied military forces for an indefinite period. It is divided into four zones of occupation: Russian (east), American (southwest), British (northwest), and French (west). The former capital, Berlin, is similarly divided into four zones of occupation.

Area and Population. As a result of the armistice of May 8, 1945, and of the Allies' declarations of June 5, announcing the assumption of joint control of Germany (see *Events*, below), the former Third Reich was reduced to its territorial limits of Dec. 31, 1937, before the annexation of Austria. This is an area of 181,688 square miles with a population of 69,459,825 on May 17, 1939. For the political subdivisions of Germany previous to its occupation by the Allies, and for the populations of the chief cities according to the census of May 17, 1939, see *YEAR BOOK* for 1944, p. 247.

Government. By virtue of the declarations of June 5, 1945, the Governments of the United States of America, the Union of Soviet Socialist

Republics and the United Kingdom, and the Provisional Government of the French Republic have assumed supreme authority in Germany in all fields and on all levels of administration. This authority is exercised by the Soviet, United States, British, and French commanders-in-chief each in his zone of occupation. Matters affecting Germany as a whole, within the limits of Dec. 31, 1937, are in the hands of a Control Council, composed of the four commanders-in-chief and their political advisers. The area of Greater Berlin is administered by an inter-allied governing authority (Kommandantur) consisting of the four local commandants and their technical staffs. As a result of the Potsdam (Berlin) Conference of July 17 to Aug. 2, 1945, a large area of eastern Germany formerly included in the Soviet zone of occupation was placed under Polish administration (see *Events*, below). For the governmental set-up in Germany prior to the surrender of that country see *YEAR BOOK* for 1944, p. 248.

The Nuremberg Trials. With the arrest of former Foreign Minister Joachim von Ribbentrop in June, all the top Nazi leaders were accounted for. Except for Hitler and Goebbels, presumed dead, Bormann missing but believed dead, and the suicide Himmler, they were all in custody of Allied authorities.

In August, Nuremberg was definitely selected as the scene of history's greatest war crimes trial and the arrested Nazi leaders, most of whom had been temporarily held at Mondorf-les-Bains in Luxembourg, were transferred to the Nuremberg city jail.

On Oct. 18 a formal indictment against twenty-four of Hitler's military and political lieutenants was presented before the International Military Tribunal set up by the Allies in Berlin, while copies of the indictment were served on the accused at the Nuremberg jail. The innumerable counts of the indictment were grouped under the four main headings of "The Common Plan or Conspiracy," "Crimes Against Peace," "War Crimes," and "Crimes Against Humanity."

The names of the accused were: Hermann Wilhelm Goering, Rudolf Hess, Joachim von Ribbentrop, Robert Ley, Wilhelm Keitel, Ernst Kaltenbrunner, Alfred Rosenberg, Hans Frank, Wilhelm Frick, Julius Streicher, Walther Funk, Hjalmar Schacht, Gustav Krupp von Bohlen und Halbach, Karl Doenitz, Erich Raeder, Baldur von Schirach, Fritz Sauckel, Alfred Jodl, Martin Bormann, Franz von Papen, Arthur Seyss-Inquart, Albert Speer, Constantin von Neurath, and Hans Fritzsche.

In addition, the prosecution requested that the entire Cabinet of Adolf Hitler, the leadership of the Nazi Party, the SS (Elite Guard), the SA (Storm Troops), the Gestapo, and the General Staff should be declared "criminal in purpose" by the Tribunal. If this were done, all individuals belonging to any of these organizations could in the future be dealt with as criminals without need for protracted trials.

The trial started on schedule, Nov. 20, after a last-minute postponement, motivated by various cases of illness both among the prosecutors and the accused, was averted.

Four of the defendants did not appear, however. They were Bormann, whose fate remained in doubt and who was tried in absentia; Ley, who committed suicide in his cell on Oct. 25; Krupp, desperately ill with softening of the brain; and Kaltenbrunner, stricken with cranial hemorrhage on the eve of the trial. A motion to eliminate Hess on mental grounds was rejected by the Tribunal (Hess later admitted that he had feigned amnesia.)

The judges selected by the four accusing powers were Francis Biddle for the United States, Sir Geoffrey Lawrence for Great Britain, Major-General I. T. Nikitchenko for Russia, and Henri Donnedieu de Vabre for France. Robert H. Jackson, Hartley W. Shawcross, Roman A. Rudenko and François de Menthon acted as chief prosecutors, respectively.

The prosecution's case was opened on Nov. 21 by Justice Jackson, the chief American prosecutor, against a general defense plea of "not guilty." The following weeks, up to the end of the year, were taken up entirely by the submission of the huge amount of documentary evidence amassed by the prosecution and presented in turn by the various national prosecutors. It bared, in ample detail, the long and sordid record of Nazi aggression. On Dec. 20 the court recessed for the holiday season, until Jan. 2.

Production. There are no statistics available yet on production in Germany under Allied occupation. From all indications it was still very low by the end of the year. The key to all industrial activity in Germany is coal. Mining operations in mid-summer 1945 were at an almost complete standstill. According to a report made by General Eisenhower on Aug. 20, the production of hard coal in the Western zones of occupation totaled 1,932,000 metric tons in July (1,315,000 in June). The same report disclosed that Germany's production of hard coal in the years 1938-1943 had been, on the average, 188,000,000 tons a year, of which 138,000,000 came from the British zone, 36,000,000 from the Eastern zone and 14,000,000 from the French zone. The coal output in the American zone was practically nil. For figures on production, foreign trade and finance under the Nazi regime, see *YEAR BOOK* for 1944, pp. 247-248.

Events, 1945. The year of total defeat and unconditional surrender opened almost auspiciously for the Nazis. In the west, the still undecided Battle of the Ardennes gave promise of at least delaying Gen. Eisenhower's all-out assault on the Reich; in the east, the long-expected Soviet winter offensive still was hanging fire; in the south, the Allies' slow drive up the shaft of the Italian boot had virtually been halted.

Better still for the Nazis, the Allies already were having plenty of trouble in the newly liberated countries. There was open discontent in France, rioting in Belgium, civil war in Greece, constant friction between Russia and the Western Powers. On the home front, too, the outlook was improving for the Germans. The news of Field Marshal von Rundstedt's initial success in the Ardennes counter-offensive once more had filled the nation with a momentary *Siegesrausch*, in which the glowing New Year proclamations of the Nazi leadership seemed to make sense. Rundstedt himself struck the key-note: "Confident and determined to the last, we cross the threshold of the year 1945. Our faith in the Fuehrer and in the united strength of our people is unshakeable. . . . We shall never flag, never give in until the enemy is beaten. Long live the Fuehrer!"

Hitler, long hidden from his wondering people, reappeared on the scene. Official news pictures showed him receiving foreign diplomats, conversing with his lieutenants and satellites, and inspecting the front. He was reported personally to have taken charge of operations in the east.

The Nutcracker Snaps. This seeming confidence and tranquillity did not last long. On January 12 the Red Army opened its long-delayed winter offensive in the crucial sector between Warsaw and

Cracow with shattering effect. Within a few days, five great army groups swung into action from the tip of East Prussia down to the mountains of Slovakia. A German military spokesman readily admitted that this was an offensive designed "not to gain ground, but to win the war." While the Russians punched one deep hole after another into the German lines, Gen. Eisenhower's armies liquidated the last remnants of the "Bulge" and prepared for the great breakthrough to the Rhine.

January 30—twelfth anniversary of Hitler's rise to power—saw the Junker strongholds of East Prussia and Upper Silesia in Russian hands, with other Red armies sweeping across Brandenburg and Pomerania toward the Oder and Berlin. In the face of impending disaster, Hitler—or a voice purporting to be his—broadcast a frantic appeal to the Germans to rally against the "horrible fate that is now taking shape in the east." Said the Fuehrer: "I expect every German to do his duty to the last. . . . I expect every able-bodied German to fight with complete disregard for his personal safety. . . . I expect the sick and the weak . . . to work with their last strength . . ."

Doomsday at Yalta. Even as military catastrophe drew near, a diplomatic disaster of comparable magnitude was shaping up for the Nazis. For a long time, their only reasoned hope of averting total defeat had lain in the chance that the Allied coalition might break under the many strains testing it. In the months since the Teheran Conference, signs of disunity among the Allies had cropped up in many places and Dr. Goebbels' agents worked overtime to foment and exacerbate dissension.

After many postponements, Roosevelt, Churchill, and Stalin, with their diplomatic and military staffs, met for the second time on February 4. The conference, which was held at the Black Sea resort of Yalta, lasted for a whole week and ended in substantial agreement on all major issues.

The Declaration of Yalta sealed Germany's doom. "It is our inflexible purpose," the Big Three announced, "to destroy German militarism and Nazism and to ensure that Germany will never again be able to disturb the peace of the world. We are determined to disarm and disband all German armed forces; break up for all time the German General Staff that has repeatedly contrived the resurgence of German militarism; remove or destroy all German military equipment; eliminate or control all German industry that could be used for military production; bring all war criminals to just and swift punishment and exact reparation in kind for the destruction wrought by the Germans; wipe out the Nazi Party, Nazi laws, organizations, and institutions, remove all Nazi and militarist influences from public office and from the cultural and economic life of the German people; and take in harmony such other measures in Germany as may be necessary to the future peace and safety of the world. It is not our purpose to destroy the people of Germany, but only when nazism and militarism have been extirpated will there be hope for a decent life for Germans, and a place for them in the comity of nations."

In this fair and statesmanlike resolution, a compromise was reached between the originally divergent conceptions of Russia and the Western Powers on how to deal with a defeated Germany. Stalin, who for many months had used rebellious elements of the German Army (banded together in the "Union of German Officers" in Moscow), gave up his plans to use their services also after the close of hostilities. Britain and America rallied,

at least in part, to the sterner Russian demands for the punishment of German war criminals, for the control of German industry, and for exacting reparations in kind, including the use of forced German labor for reconstruction work.

The Nazis greeted the decisions of Yalta with frenzied shouts of "mass murder" and terrible vows of vengeance, but they were unable to prevent their execution. Within a few days after the close of the conference, the western arm of the Allied nutcracker moved again, as Gen. Eisenhower launched four large armies toward the Rhine and the Ruhr basin. Simultaneously, the air war reached a furious climax. Day after day, Berlin, Leipzig, Dresden, Munich, and other German cities rocked under earth-shaking bombardments.

Disintegration. By early March, with Allied armies surging across the Rhine and the Oder for the knockout blow, signs of complete disintegration spread throughout Hitler's Reich. On March 17, the German-home radio reported that 1,000 officers and men of the German Army had been put to death by mobile courts-martial for desertion and other military offenses. Two days later, a drastic decree was issued, cancelling all leaves, calling up all men between the ages of 16 and 60 not yet in the armed forces, and threatening severe punishment of deserters, both military and civilian. Reports from the eastern front told of scores of bodies found hanging from gallows in captured towns, bearing labels such as these: "I was hanged because I did not fight well," or "I was hanged because I tried to leave too soon." The food situation worsened daily and there was a country-wide breakdown of transport and communication facilities.

With inescapable disaster staring in their faces, the Nazi leaders multiplied frantic appeals and dire threats, now occasionally mixed with apologies and attempts at self-justification. A message from Hitler, broadcast on the 25th anniversary of the announcement of the Nazi Party's program (February 24), still resounded with familiar boasts: "Twenty-five years ago I predicted the victory of our movement. Today, filled as always with belief in our nation, I predict final victory for the German race." A few weeks later, however, in a proclamation issued on "Heroes' Memorial Day" (March 11) the Fuehrer placed the emphasis on arguments in defense of his policy of rearmament and aggression, plainly in an attempt to silence the accusing voices that were beginning to make themselves heard even in Gestapo-ridden Germany.

In his turn, Dr. Joseph Goebbels, who, along with Heinrich Himmler and Martin Bormann, emerged as one of the strong men of Germany's dying days, filled the air with exhortations, blandishments and threats. But, toward the end of March, it became abundantly clear that Goebbels' once so efficient propaganda machine had lost its power, what with the steadily shrinking territory within its reach and ever spreading scepticism and despair.

The Death Throes. April was the month of agony and final convulsions. On April 5, *Das Schwarze Korps*, Himmler's organ, sombrely and accurately predicted that Germany was "only days or perhaps weeks from absolute collapse." The tragic death of President Roosevelt on the eve of Allied victory gave Nazi propagandists a temporary shot in the arm. Goebbels reiterated his favorite theme of Providential intervention: "The leader of the enemy coalition has been struck down by that very fate which kept our Fuehrer alive on July 20, 1944,

amid dead, wounded, and ruins so that he might complete his work." Hitler himself, in a final fling of spitefulness, declared in an order of the day that "fate has taken the greatest war criminal of all times from this earth."

As the fall of Berlin neared, and a link-up between the rampaging Russian and American-British armies in the heart of Germany appeared imminent, long-standing preparations for a last-ditch stand in the "National Redoubt" of Southern Germany were rushed to completion. On April 16, Japanese and other diplomats accredited in Berlin were moved to Bad Gastein, Austria, which had been selected as the temporary seat of the Nazi government. Archives and valuables also were evacuated to various hiding places within the Alpine "redoubt" area. The wives of prominent Nazi leaders sought refuge there, too, and in many cases they were accompanied by their husbands, who were supposed to be manning the barricades. Even before this exodus toward Southern Bavaria and Austria reached its peak, a Hitler decree, issued April 7, laid the foundation for continued underground resistance in Allied-occupied portions of the country by ostensibly divorcing Nazi Party leadership and civil administration. The decree stipulated that "all Party and State functions on the Kreis (county) level, where they are held by the same person, shall be separated." This move was a follow-up to the official sanction given, a few days earlier (April 1st), to the so-called "werewolves' organization," whose purpose it was to wreak individual vengeance upon renegades and traitors to the Nazi cause. The "werewolves" did assassinate a few mayors appointed by the Americans in the Rhineland, but on the whole their performance fell far short of what the Nazi leadership had expected from them.

While most of Germany's professional military leaders realized, in April, that the war was irrevocably lost, the extremists of the Nazi Party, especially men like Himmler, Goebbels, Bormann, and Robert Ley, leader of the Labor Front, preferred national suicide to surrender. Their hopes of prolonging the struggle for many more months, or even years, were based on (a) the existence of the naturally inaccessible, and strongly fortified, "Alpine Redoubt," matched in the north by "Mountain Fortress Norway"; (b) the fact that the advancing Allied armies had left in their rear more than a dozen Nazi "islands of resistance," some of them, like the Latvian pocket, still held by strong German forces, while others, the French Channel and Atlantic ports in particular, had proved capable of sustaining a long siege by superior forces; and (c) the campaign of terrorism, planned by the "werewolves," which, the Nazi leaders hoped, would prevent the local population, everywhere in the Reich, from submitting to Allied rule. That these elaborate plans completely failed to materialize, after all, is primarily due to the fact that the man to whom Germany for twelve years had blindly entrusted her fate, Adolf Hitler, lost heart in the supreme hour of crisis.

Finale in Berlin. The mystery of Hitler's death, if real, has not yet been fully cleared up, and indeed may never be. While the British authorities, and high American officials as well, have accepted the fact, if not the alleged circumstances, of Hitler's death in the ruins of Berlin, Russian scepticism persists. In the latter part of 1945, in particular, rumors that the ex-Fuehrer is still alive and at large cropped up repeatedly, though none of them could be substantiated.

Undisputed is the fact that Hitler, instead of

retreating with his government into the "Alpine Redoubt," decided personally to lead the defense of Berlin and to hold out there as long as possible.

Soviet spearheads, after a spectacular night attack by 4,000 tanks and almost 5,000 airplanes striking across the Oder in the white glare of massed searchlights, reached the outskirts of the Nazi capital on April 19, the eve of Hitler's 56th birthday, and two days later entered the city proper.

There, in the elaborate "Fuehrerbunker," dug deep underground beneath the Reich Chancellory, one of history's greatest dramas was enacted in the last ten days of April.

At the afternoon military conference, on April 20, General of the Army Krebs, the officer in charge of the defense of Berlin, reported that the city's position had become critical. It was decided, then, to evacuate all non-essential personnel and reduce the military staffs at the Chancellory and the High Command to skeleton strength. Disregarding the urgent advice of his entourage, Hitler insisted on staying, but two of his principal lieutenants, Himmler and Goering, hurriedly left that night for safer parts. The former went to his military headquarters in northwestern Germany, the latter fled into the "National Redoubt." Goebbels and Martin Bormann, the Fuehrer's Deputy, stayed.

On the 21st, Russian heavy guns began to shell the Wilhelmstrasse with devastating effect. By noon, the following day, Soviet vanguards were converging from several sides toward the center of Berlin. In the Fuehrerbunker, almost uninterrupted conferences were held. The decisive meeting took place in the late afternoon of April 22. The Chief of the High Command, Field Marshal Wilhelm Keitel, and his Chief of Staff, Col. Gen. Alfred Jodl, joined Bormann and the other political advisers in urgent pleas to the Fuehrer to leave while some avenues of escape still were open. All their insistence was to no avail, however. Hitler, physically and mentally ill, had made up his mind to die by his own hand rather than risk eventual capture in the mountains. His decision apparently was strongly influenced by the morbid desire of his mistress Eva Braun to die with him in a suicidal pact preceded by a last-minute wedding.

Following the April 22 conference, which marked the beginning of the end for Hitler, Keitel and Jodl also left Berlin, the latter with the remark: "I won't remain in this mousehole. Here you cannot work or fight or operate." Only the Fuehrer's "family circle" stayed behind along with Goebbels and Bormann. A last attempt to persuade Hitler to leave was made by the Minister of Armaments, Prof. Albert Speer, on April 23, but it also failed.

Meanwhile, Himmler, at his northern headquarters, had decided to dissociate his fate from that of his doomed Fuehrer. Through the intermediary of Count Folke Bernadotte of Sweden, whom he met secretly at Luebeck, on April 24, he forwarded a conditional surrender offer to the Allies, which did not include the Russians. Himmler immediately was informed that only unconditional surrender on all fronts would be acceptable. During his talks with Count Bernadotte, Himmler ventured the information that Hitler was so ill he might already be dead and that he could not live more than two days.

On the afternoon of April 25, American troops of the Twelfth Army Group joined forces, near Torgau in Central Germany, with advance elements of the First Ukrainian Army Group. Thus

the territory still controlled by the Nazis was effectively cut in two. At the same time, Berlin was completely encircled by two Russian armies joining northwest of Potsdam.

By April 29, when Soviet tanks broke through to the immediate vicinity of the Reich Chancellory, all hope of relief for the inmates of the "Fuehrerbunker" had vanished. That night, Hitler and Eva Braun were married in the conference room of the bunker. Not many hours later—apparently in the early afternoon of April 30, the newlywed couple committed suicide, Hitler by shooting himself, the woman by taking poison. After their suicide, the bodies were soaked with petrol and set afire in a garden just outside the bunker. Whether they were consumed by the flames, or the remains were buried, is not known.

The foregoing account is based primarily on the findings of British intelligence officers who interviewed members of Hitler's personal staff captured after Germany's collapse. An official statement declaring that the suicide of Hitler and Eva Braun had been established "as conclusively as possible without bodies" was released by the Allied Control Council, British Echelon, on Nov. 1. As far as can be ascertained, the investigations conducted by American intelligence officers arrived by and large at the same conclusions. Russian scepticism, however, has not yet been dispelled. While the Soviet authorities have accepted the story of Hitler's marriage at the climactic moment of the Battle of Berlin—indeed the first news of this peculiar event was given out, at a press conference on June 9, by Marshal Gregory K. Zhukoff—they have steadfastly maintained that the pair still could have escaped by air and that, at any rate, there was no positive evidence of Hitler's death. Zhukoff's assistant, Col. Gen. Nikolai E. Berzarin, stated on the same occasion: "My personal opinion is that he (Hitler) has disappeared somewhere into Europe. Perhaps he is in Spain with Franco. He had the possibility of taking off and getting away." This Russian view, often repeated in the press since, was in no way altered by the above-cited British statement.

Whatever the truth about Hitler's disappearance from the political scene at the end of April, it is quite certain that the official version given out by the Germans was untrue. On May 1, Admiral Karl Doenitz, Commander-in-chief of the German Navy, in a highly melodramatic broadcast over the North German radio network, announced that Hitler had died "a hero's death" fighting to his last breath against the Bolsheviks. According to the broadcast, the Fuehrer "fell for Germany" on the afternoon of May 1, after having appointed Doenitz as his successor.

Collapse and Surrender. For a few days, the new Fuehrer, Admiral Doenitz, sought to continue the hopeless struggle, in an obvious attempt to split the Allies by fighting against the Russians alone. The trick, already attempted by Himmler, again failed to work. Allied armies, both from the east and west, continued to slash deeper into the tottering Reich. Munich fell on April 30, Berlin on May 2. In many places revolt broke out causing important strategic points to be taken without resistance.

The first mass surrender of the beaten German Army took place on April 29 at Caserta, Italy, but it was not announced until May 2. Preceded by lengthy secret negotiations between OSS agents and representatives of Elite Guard General Karl Wolff, the German plenipotentiary in Italy, the capitulation involved nearly one million Nazi troops in Northern Italy and Southern Austria. It threw

the southern gates to the "National Redoubt" wide open to the Allies and spread confusion and demoralization among the German troops still holding out on other fronts.

Nevertheless, for a few days the possibility of a desperate German stand in the Scandinavian countries and Holland persisted. Even as the Germans in Italy laid down their arms, the Nazi commissioners and commanders in Denmark, Norway, the Netherlands, Bohemia, and elsewhere pledged their allegiance to Doenitz and promised to continue the fight. Signs of disunity, however, spread to all parts of Hitler's one-time empire and German resistance simply melted away in the face of rapid Allied advances.

On May 4, all German forces in Holland, Denmark and Northern Germany gave up to British Field Marshal Sir Bernard L. Montgomery, and the following day Doenitz admitted in a radio broadcast that "the struggle against the Western Powers has become senseless." However, neither the new Fuehrer, nor his Foreign Minister, Count Lutz Schwerin von Krosigk (who had replaced von Ribbentrop on May 1), were ready yet to capitulate to the Russians. In a last, desperate attempt to divide the Allies, the Nazi leaders even ordered troops facing the Soviet armies to turn around and surrender to the Anglo-American forces instead.

It was not until virtually all of Germany had been occupied, with the exception of a few isolated pockets in the north and southeast, that these maneuvers were abandoned. On May 5 an armistice delegation headed by Gen. Admiral Hans Georg Friedeburg, the new commander of the German Navy, arrived at Gen. Eisenhower's headquarters at Reims for preliminary talks. Once again, Friedeburg attempted to exclude the Russians from the parley but he was told immediately that Gen. Eisenhower would not talk about anything but unconditional surrender to all the Allies. As he did not carry credentials from Doenitz authorizing him to sign an act of capitulation, the admiral was instructed either to obtain such powers from his government or to request the immediate dispatch of other delegates empowered to sign. In compliance with this virtual ultimatum, Doenitz sent his chief of staff, Col. Gen. Alfred Jodl, who arrived at Reims by air on the morning of May 6, accompanied by his aide, Major Wilhelm Oxenius.

For almost twenty-four hours, the unhappy German emissaries—Admiral Friedeburg, in particular, displayed vivid emotion—argued and haggled about each point of the surrender document they were requested to sign. Repeatedly they consulted Doenitz by long-distance telephone. Finally, at 2:41 A.M. on May 7, 1945, (European time), the document was signed by Gen. Jodl on behalf of the German High Command, and by Lt. Gen. Walter Bedell Smith for the Supreme Allied Commander. A French and a Russian general also affixed their signatures.

In spite of the fact that the Reims surrender document bore the signature of Gen. Ivan Susloparoff on behalf of the Soviet High Command, Moscow was not fully satisfied with the procedure and it was agreed that a formal ratification of the surrender should take place at Berlin. There, on May 9, at 12:15 A.M. European time, the Chief of the German High Command, Field Marshal Wilhelm Keitel, affixed his signature to a new Act of Surrender identical with the Reims document except for a few additions defining more closely the details of the surrender of German troops. The ceremony took place at the headquarters of Soviet Marshal Gregory K. Zhukoff in the suburb of Karlshorst.

The official end of the war in Europe was set at midnight, European time, May 9 (6:00 P.M., Eastern War Time on May 8), when the cease fire order went into effect. However, some German Army units, especially in Bohemia and Yugoslavia, continued hostilities in open defiance of the surrender terms. It was not until May 15 that the last Soviet communiqué was issued, announcing that "the reception of surrendered German officers and men on all fronts has been concluded."

Flensburg Interlude. Although his authority originated from no better source than the supposed last will of the supposedly dead dictator Hitler, Admiral Doenitz made an overt bid to retain power even after total defeat and surrender. In a broadcast over the Flensburg radio, on May 8, he declared: "The foundation on which the German Empire was built is a thing of the past. The unity of State and Party no longer exists. The Party has disappeared from the scene of its former activity. With the occupation of Germany power has passed into the hands of the occupation forces. It depends on them whether I and the government formed by me will be able to continue in office . . ."

The Allies neither confirmed Doenitz and his skeleton Cabinet in their posts, nor did they immediately proceed to oust them. For a few weeks, despite mounting criticism by the Russian press in particular, Doenitz' shadow government was permitted to function in comparative freedom at improvised headquarters at Flensburg near the German-Danish border. It was officially explained that this tolerance was motivated by a desire to control and administer the then still considerable German forces pending their demobilization.

In the meantime, a comprehensive man-hunt for Nazi leaders and war criminals was set in motion throughout occupied Germany and the liberated countries. It netted, within a few days, some of the biggest names on the Allies' long-standing "Wanted" list.

First to fall into the hands of his pursuers was Reich Marshal Hermann Goering who was taken on May 9 in the vicinity of Salzburg. Next, on May 16, Robert Ley was picked up, also in the "National Redoubt" area. The notorious Jew-baiter Julius Streicher was arrested on May 23, appropriately by a Jewish officer. Late on the same day, an intensive search made by British authorities in the Bremen area led to the capture of the No. 2 Nazi criminal, Heinrich Himmler. A few hours after his arrest, the Gestapo chief managed to swallow poison by biting open a tiny phial concealed in his mouth; he died almost instantly in spite of strenuous efforts to revive him. A large number of former Cabinet ministers, Gauleiters, and Nazi Party officials also were seized during that period. Of high-ranking military men, Field Marshal Keitel was placed under arrest on May 15; Field Marshal Albert Kesselring, the last West Front commander, had surrendered a few days earlier in Austria.

With most prominent Nazi leaders reputed dead or in prison, and German forces everywhere under control, the last step in the liquidation of the Third Reich was taken on May 23 when British military police arrested Doenitz, Jodl, Schwerin von Krosigk and other members of the shadow government at Flensburg. The transitional regime instituted by Doenitz after Hitler's death was dissolved.

AMG Takes Over. The occupation and administration of conquered Germany had been planned long beforehand in the councils of the Big Three and in inter-Allied commissions of experts. Yet, when the moment arrived and the immediate necessity arose of substituting Allied Military Gov-

ernment for the ousted Nazi authorities, there were many unforeseen problems and difficulties.

For one thing, the chaos and destruction left behind by the Nazis in what used to be the heart of the European Continent far exceeded even the most pessimistic forecasts. For another, the collapse of the Hitlerian regime came more suddenly than had been expected. Finally, the fundamental differences in the occupation policies of the Big Three had been smoothed over rather than settled at Teheran and Yalta.

The first step for each of the three conquering powers was to set up, in its respective zone of military operations, a provisional administration patterned after its own principles and designs. Thus, by the time Germany surrendered all its territory and population, the Americans in the Rhineland and the Russians in Eastern Germany had already developed fairly well-organized forms of AMG, which—not unnaturally—differed widely from each other in many respects.

Thus, the first major problem confronting the Allies was that of coordinating their policies of occupation and regional administration, and another was to guard against encroachments of one upon another's territory and rights:

The territorial division of Germany into American, British, Russian,—and eventually a French,—zones of occupation had been agreed upon, in principle, at the Big Three meetings. When the Nazi collapse came, however, it appeared that the Russians, in some sectors, had not reached the limits of the zone assigned to them for occupation, and that the Americans, in particular, had been carried by the impetus of military advance farther than their political authority was to extend. This state of affairs for some time stymied efforts effectively to organize the joint control of Germany because the Russians insisted on prior withdrawal of the American forces from Thuringia and other areas assigned to Soviet control.

Formal assumption of control over the Reich by the victorious powers took place on June 5 by a series of declarations simultaneously issued in Washington, London, Moscow, and Paris.

Stating that "There is no central government or authority in Germany capable of accepting responsibility for the maintenance of order, the administration of the country and compliance with the requirements of the victorious powers," one of the four documents issued proclaimed: "The Governments of the United States of America, the Union of Soviet Socialist Republics, the United Kingdom, and the Provisional Government of the French Republic, hereby assume supreme authority with respect to Germany, including all the powers possessed by the German Government, the High Command, and any state, municipal or local government or authority . . ."

In another declaration, the Allied Powers formalized the division of Germany "within her frontiers as they were on Dec. 31, 1937," into four zones of occupation, viz, an eastern zone allotted to Russia, a northwestern zone to be controlled by Great Britain, an American-ruled southwestern zone, and a western zone reserved for the French. The final demarcation of these zones did not take place until mid-August, after the Americans had yielded a sizable area in Central Germany to the Russians, and British forces had taken over control of the northern part of the Rhineland and of the Ruhr district, previously occupied by U. S. troops. Under this arrangement, Russia, the United States, and Great Britain were allotted each about 40,000 square miles of German territory, while the French

had to be content with only about one-half of that area. The French were given a zone shaped like an hour-glass, on both sides of the Rhine, including the southern part of the Rhineland, the Saar, the Palatinate, most of Baden and the southern half of Wuerttemberg. The adjoining American sector comprised Bavaria, the northern part of Wuerttemberg (including Stuttgart), Hesse and Hesse-Nassau. The Russian zone embraced Mecklenburg, Saxony, Thuringia and Brandenburg (in addition to the provinces of East Prussia, Silesia, and Pomerania subsequently relinquished to Poland). The British took Schleswig-Holstein, Hanover, Hamburg, Bremen, Oldenburg, Brunswick, Westphalia, the northern Rhineland, and sundry small German states in that area.

A special arrangement was made with respect to Berlin. The ruined, but still populous, Reich capital was, in its turn, quartered into American, British, Russian, and French zones of occupation, enclosed on all sides by Russian-controlled territory. An Allied governing body (Kommandantur), consisting of four commandants was set up to administer this "Greater Berlin" area.

In the matter of occupation policy and coordination, one of the declarations released on June 5 stipulated that "supreme authority in Germany will be exercised, on instructions from their Governments, by the Soviet, British, United States and French commanders-in-chief, each in his own zone of occupation, and also jointly, in matters affecting Germany as a whole. The four commanders-in-chief will together constitute the Control Council. Each commander-in-chief will be assisted by a political adviser. The Control Council, whose decisions shall be unanimous, will ensure appropriate uniformity of action by the commanders-in-chief in their respective zones of occupation and will reach agreed decisions on the chief questions affecting Germany as a whole . . ."

After having thus established Allied authority over Germany, and the machinery for exercising it, the four powers, on June 5, imposed on the Reich a detailed armistice elaborating on the brief articles of unconditional surrender signed on May 7. It provided for the complete disarmament of all armed forces under German control, the evacuation of all territories outside the German frontiers of Dec. 31, 1937, the surrender of all aircraft, ships, war materials, war plants and equipment. Other provisions required Germany to surrender all Allied prisoners and all Nazi leaders and war criminals specified by the Allies. In another article, the Allied powers, mindful of the scuttling of the German fleet at Scapa Flow after the first World War, explicitly forbade the destruction, damaging, or transfer of military, naval, shipping or industrial material, or records or archives. Finally, it was announced that the Allies would take over all state, municipal, or local governments as well as the direction of all railways, transports, communications and radio services in the Reich. Article 14 put teeth into the document: "In the event of failure on the part of the German authorities or people promptly and completely to fulfill their obligations hereby or hereafter imposed, the Allied representatives will take whatever action may be deemed by them to be appropriate under the circumstances."

A special declaration issued in connection with the above informed the other United Nations of the assumption of supreme authority in Germany by the Big Four and promised that the Control Council would consult them in the exercise of this authority.

The Control Council at Work. The first meeting of the four-man Control Council was held in Berlin on the day the above declarations were issued. It was attended by Gen. Dwight D. Eisenhower for the United States, Field Marshal Sir Bernard L. Montgomery for Great Britain, Marshal Gregory Zhukoff for Russia, and Maj. Gen. Jean de Latre for France. After this initial meeting, however, there was an interval of several weeks before the Council began to operate effectively, due to the above-mentioned Russian demand that the Americans should first withdraw from all territories allotted to the Soviet authorities of occupation.

Among the first tasks confronting the Council were those of preparing the entry of American, British, and French troops into Berlin and of confirming or changing the German administration set up in that city by its Russian conquerors.

On July 12, the Soviet authorities in Berlin formally turned over control of twelve of the city's twenty boroughs to American and British representatives; French participation in the occupation of Berlin was delayed by several weeks until August 13, but a French representative joined in the establishment of the four-power Kommandantur on July 11.

By common agreement, orders and regulations issued by the Russian military commander during the period of exclusive Soviet control of Berlin remained in force unless and until explicitly altered by the Control Council or the Kommandantur. The personnel of the first city administration set up by the Russians under Lord Mayor Arthur Werner also was continued in office but on August 2 the Food Controller, Dr. Andreas Hermes, was dismissed on charges of inefficiency. In the following weeks and months, a considerable measure of coordination was achieved in the four-power control of the former German capital. Concerted drives on the flourishing black market were organized and a common approach to the ticklish question of "fraternization" was worked out. However, in spite of the steady tendency toward uniform and centralized rule of Berlin, certain differences in policy persisted, especially in such matters as control of the press, leading to diverse regulations in various parts of the city.

The Potsdam Conference. On July 17, the President of the United States, Harry S. Truman, the Prime Minister of Great Britain, Winston S. Churchill, and the Soviet Premier Joseph V. Stalin met at Cecilienhof Palace near Potsdam for the third "Big Three" meeting of the war. At the close of the Conference, on August 2, a communiqué was issued which, among other matters of importance, dealt with the future fate of Germany.

Perhaps the most momentous decision of the Potsdam Conference in regard to Germany was that it virtually stripped the Reich of its eastern provinces. Although the three heads of government agreed that the final determination of boundaries should be left for the peace settlement, they decided that, in the meantime, all former German territories east of a line running from the Baltic Sea immediately west of Swinemünde, and thence along the Oder River to the confluence of the western Neisse River and along the western Neisse to the Czechoslovak frontier, should be turned over to Polish administration. This meant that, for all practical purposes, East Prussia (with the exception of Königsberg and an adjacent area which were placed under Soviet administration), Upper and Lower Silesia, the eastern half of Pomerania, and parts of Brandenburg Province became Polish.

Whether or not this had been agreed upon at

Potsdam, the Poles, in the following months, ejected virtually the entire German population—which, before the war, had been in an overwhelming majority in those provinces—from the annexed territories. Although the Potsdam Declaration had prescribed the transfer of German populations in Eastern Europe "in an orderly and humane manner," millions of Germans were driven from their homes east of the Oder and dumped into overcrowded and largely devastated areas of Central and Western Germany. This mass expulsion, which greatly aggravated the already pressing difficulties of nutrition and hygiene in the occupied Reich, caused repeated and vigorous protests in the British House of Commons and elsewhere, but from all indications it was carried out with at least the tacit approval of the Soviet Union.

In the matter of reparations, the Potsdam Conference decided that Germany should be compelled "to compensate to the greatest possible extent for the loss and suffering she has caused to the United Nations and for which the German people cannot escape responsibility." It was agreed in principle that each occupying power would take reparations from its respective zone in Germany but, recognizing that the Soviet Union had suffered greater losses than any of the other major powers, provision was made for additional compensation for Russia from industrial equipment to be removed from the western zones of Germany.

Rigid measures of control were agreed upon to prevent German economic strength from ever becoming a menace again. In rebuilding the country's shattered economic system, the Potsdam Declaration stated that "primary emphasis shall be given to the development of agriculture and peaceful domestic industries," and "the German economy shall be decentralized for the purpose of eliminating the present excessive concentration of economic power as exemplified in particular by cartels, syndicates, trusts and other monopolistic arrangements."

In the political field, the Allied leaders agreed that Germany should be completely disarmed and demilitarized; that the Nazi Party and all its institutions should be uprooted; that all war criminals should be brought to justice and all other Nazi leaders interned; that German education should be so controlled "as completely to eliminate Nazi and militarist doctrines and to make possible the successful development of democratic ideas"; that democratic political parties should be allowed and self-government "on democratic principles" should be restored throughout Germany; and that, subject to military security, freedom of speech, press, and religion should be permitted.

The Potsdam Declaration gave an authoritative reply to many controversial questions regarding the future of Germany. It settled the issue between advocates of a "hard" and those of a "soft" peace, preponderantly in favor of the former. It gave clear notice that for some time to come there would be no central German government, but that the country, during the period of occupation, would be treated as a single economic unit. It warned the German people "that they have suffered a total military defeat and that they cannot escape responsibility for what they have brought upon themselves . . ." but also held out hope by telling the Germans "to prepare for the eventual reconstruction of their life on a democratic and peaceful basis."

Remaking Germany. The principles and purposes of the Potsdam Declaration were translated, in the following months, into a series of important decrees

by the Allied Control Council as well as by the individual commanders-in-chief, each for his zone.

On August 6 Gen. Eisenhower and Field Marshal Montgomery, in simultaneous announcements, warned the Germans that they would be faced with serious shortages of food, fuel, housing and transport in the winter ahead. The Germans were advised to cut wood as a substitute for coal, which would not be available at all in private homes, and to speed up repairs of bomb-damaged houses. The two commanders also declared that law and order had been restored in Germany and they promised their assistance in the rebuilding of German life on a "democratic" basis and on "true, liberal" principles. Henceforth, they declared, local political activities and the forming of local trade unions would be permitted, "subject to the approval of the local military government."

The Allied Control Council, on Sept. 20, lifted all restrictions on "fraternization" between Allied soldiers and Germans, but the right to control marriages and billeting with German families was reserved to the individual commanders. The following day, Gen. Eisenhower declared that the ban on marriages between American military personnel and Germans would continue in force.

A 48-point proclamation issued by the Control Council on Sept. 25 formally abolished all German armed forces, Nazi organizations, war veterans' associations and other bodies designed "to keep alive the military tradition in Germany." The Hitler party was "finally abolished and declared to be illegal." The Council also abolished the German diplomatic corps and assumed control of all matters affecting Germany's relations abroad.

Another decree, published on Oct. 22, restored the equality of all persons before the law, abolished all "people's tribunals" and "special courts" instituted under the Nazi regime, and put an end to the arbitrary principles of jurisprudence applied by Nazi judges.

The complex task of controlling and dismantling the highly centralized German industrial structure was begun in October after it had been revealed that despite incessant bombing and battle damages fully 75 percent of Germany's industries survived intact or in repairable condition.

On Oct. 12 it was announced in Berlin that the entire holdings of the huge I. G. Farben Trust had been confiscated and that many of the 300 plants owned by the concern would be either destroyed or dismantled for reparation purposes. First to be blown up, a few weeks later, were three of the Trust's ammunition plants in the American zone. On Nov. 16, the Krupp armament concern, whose plants are situated mostly in the British zone, was similarly confiscated by Montgomery. At the same time, the Russians announced the expropriation of Friedrich Flick's vast industrial holdings in Saxony. Russia also let it be known that she desired removal to the U.S.S.R. of all the machinery and equipment of the Opel Motor Works (partly owned by General Motors), as part of her share of reparations to be drawn from Western Germany.

German assets abroad, especially in neutral countries, were marshalled by an ordinance of the Council made public on Nov. 4.

Housecleaning in Bavaria. In the first few months following Germany's surrender, there developed, in the American zone of occupation, a serious divergence of opinions among Military Government officials on the question of "denazifying" Germany. The rift was especially marked in the Eastern Military District (Bavaria), where Gen.

George S. Patton, commander of the Third Army, ruled supreme as military and civil governor. Patton, from the start, inclined toward those who argued that it was more important to get the German economic system and administrative machinery running again than to push the purge of Nazis and militarists.

In keeping with this attitude of their chief, AMG officers in Bavaria allowed many known Nazis or Nazi sympathizers to remain unmolested for months, or even to keep important posts in the administration and in business.

On May 28, Col. Charles E. Keegan, Patton's chief executive officer, appointed Friedrich Schaeffer, a member of the conservative and clerical Bavarian People's Party, as Minister-President (Premier) of Bavaria. In the selection of his Cabinet, Schaeffer, besides heavily favoring his own party, included a number of former Nazis, such as the Minister of Finance Ernst Fischer. The Lord Mayor of Munich, Karl Scharnagl, likewise permitted the infiltration of Nazi sympathizers into the new city administration. As chief of police, Keegan appointed a man whose record included active participation in Hitler's Beer Hall Putsch of 1923: Colonel Hans von Seisser.

Keen disappointment in Bavarian anti-Nazi circles, and the growing arrogance of former Nazis, who instead of being in jail were found strutting about government offices in Munich, attracted the attention of American correspondents in that city. The situation developed into a real scandal which produced strong reverberations in America.

Following the recall of Col. Keegan late in July, a purge of the Bavarian civil administration was begun but proceeded slowly. Ernst Fischer was dismissed in August, along with several other members of Schaeffer's Cabinet. On August 21, Seisser was replaced by Michael von Godin, a staunch anti-Nazi and former police official who had also taken part in the Beer Hall Putsch, but on the opposite side: he had ordered his men to fire on the rebels led by Hitler.

However, the controversy between AMG officials went on and the purge of Nazis continued to lag even after Gen. Eisenhower, at a conference at his headquarters in Frankfurt-on-Main on August 27, had demanded the prompt and ruthless elimination of Nazism and militarism, in accordance with the Potsdam Declaration. As late as Sept. 19, a leading correspondent of the *New York Times* reported: "An unofficial survey of conditions in a score or more of German industrial towns and cities indicates that while the purge of important Nazis has been proceeding slowly in the political structure of the conquered country, there is a general tendency, with a few notable exceptions, to ignore, evade, or circumvent Gen. Dwight D. Eisenhower's explicit order of July 20 to permit German industry and business to resume operations only after ousting Nazi Party members from positions of management and direction."

The situation came to a head on Sept. 22, when Patton in an interview with three American correspondents expressed the opinion that the whole issue of nazism vs. non-nazism was comparable to a Democratic-Republican election fight. This, and other similarly unfortunate remarks, caused such a storm of editorial criticism in the American press that Patton, three days later, attempted to justify himself in a second interview, altering his stand considerably. But it was already too late. Called urgently to Gen. Eisenhower's headquarters, Patton was relieved of his duties as military governor of Bavaria.

A few days before Patton's transfer to a "paper command" was announced on Oct. 2, a real house-cleaning got under way in Bavaria on direct orders from Eisenhower. Minister-President Schaeffer and his entire Cabinet were dismissed and a Social-Democrat and tested anti-Nazi, Dr. Wilhelm Hoegner, was entrusted instead with the task of forming a new government; he selected four Social-Democrats, one Communist, and two Liberals as his ministers.

The Patton incident had far-reaching repercussions not only in Bavaria, where his successor, Lt. Gen. Lucian K. Truscott Jr., proceeded fully to carry out Eisenhower's instructions, but also in the other administrative units of the American Zone, especially Wuerttemberg, and in the British zone. There, two high officials who had been appointed by the Americans in the first phase of the occupation, Dr. Hans Fuchs, provincial head of the northern Rhineland, and Mayor Konrad Adenauer of Cologne, were removed by the British early in October. In Berlin, Prof. Ferdinand Sauerbruch, health commissioner in the city government, was dismissed on Oct. 11. Large-scale arrests of Nazi-minded industrialists and financiers also were carried out in October and November in the American and British zones.

On Oct. 12 Gen. Eisenhower, declaring that "any man in my army who I learn is not executing our policies with his heart, as well as his head and hands, will be placed in a job where he won't need to use his heart," reiterated his determination to "uproot nazism in every shape and form." He also announced that Nazis would be excluded from the polls in the local and provincial elections planned for the early months of 1946.

Eisenhower's Accounting. In a series of monthly reports, published, respectively, on Sept. 29, Oct. 16, Oct. 31, and Nov. 29, Gen. Eisenhower rendered a detailed account of his administration to the Joint Chiefs of Staff in Washington.

In his first report, covering the month of July, the general reported, among other things, that 80,000 Nazis in the mandatory-arrest category had been detained and that some 70,000 others had been removed from office. He also pointed out that Germany was bankrupt economically and intellectually and threatened by inflation.

The second report, covering the month of August, again stressed the lack of balance in Germany's economy, with the gross national production at less than 25 percent of its wartime level and purchasing power far in excess of available goods. The general outlined a 3-point anti-inflation program based on rigid price controls, the rapid restoration of production facilities to the levels authorized at Potsdam, and deflationary fiscal measures. Eisenhower also expressed his conviction that "a fair and impartially supervised election in Berlin would not support the present Communist party dominance of posts."

In his third report, Eisenhower called attention to the Germans' increasingly violent reaction to the preferential treatment given displaced persons and to the fraternization of German girls with Allied soldiers, as well as to other signs of growing unrest. He noted that the Germans also were getting "bolder in their criticism of the government," and warned that organized uprisings against the occupation forces might occur if widespread unemployment persisted.

Eisenhower's fourth and last report, covering October and the early part of November, was issued shortly after his appointment as Chief of Staff of the Army. Highlight of the report was the

blunt charge—also made by other high U. S. officials returning from Germany—that the administration of the Reich as an economic unit, as provided in the Potsdam Protocols, was being obstructed by the French. A proposed law to authorize the formation of trade unions on a national basis also had been foiled by French opposition, he revealed.

On Nov. 27, General Joseph T. McNarney, who a week earlier had succeeded Eisenhower as commander-in-chief of the U. S. forces of occupation in Germany, and American representative on the Control Council, predicted that the occupation would last ten years or more. He added, however, that the administration of Germany would be turned over to Allied civil authorities not later than June 1, 1946.

JOACHIM JOESTEN.

GOLD. Revocation by the War Production Board of its order L-208, effective July 1, 1945, allowed gold mines of the United States to resume unlimited production for the first time since Oct. 8, 1942, when the order went into effect. Necessity for rehabilitation of workings, shortage of labor, and lack of machinery and materials slowed the return of most mines to production, however, and total production figures for the year showed a drop from the previous record low of 998,394 fine oz. (revised) set in 1944. Production for 1945 was about 967,500.

From the time the mining ban was lifted until the end of the Japanese war, mines were haltered by Federal manpower restrictions channeling available labor to essential industry. Machinery and materials likewise went to metal mining essential to the war, while it lasted, and to industrial reconversion.

Gold production, as in previous war years, was largely a by-product of ores containing such essential war minerals as copper, lead, zinc, and tungsten. Utah Copper Co., whose copper mining operations were the largest in the United States, likewise was again the country's leading gold producer, and Utah topped the list of producing states. California, Nevada, Colorado and Arizona followed. In the latter part of the year, Alaska, California and South Dakota, which produce principally from straight gold ores and gravels, showed sharp gains.

The status of gold as a monetary base received further stability through passage by Congress of legislation providing for United States participation in an international bank and stabilization fund as provided by the Bretton Woods Conference. As passed, the agreement provides for defining currency par values in terms of gold or U. S. dollars.

Among world producers, the United States was third, being led by South Africa with an estimated 12,200,000 fine oz. and Canada with an estimated 2,600,000 fine oz.

CHARLES T. POST.

GOLF. A review of golf for the last season is a story of the feats of one Byron (Lord) Nelson, and the achievements of the popular ex-caddie were enough to fill a book or two. The 33-year-old Texas-born star, who had been acclaimed "Athlete of the Year" for his numerous record-making triumphs of 1944, soared to new heights in 1945.

Although midsummer found many of the sport's former top-notchers returned from the service and back on the links, this did not prevent Byron from gaining top ranking for the second year in a row.

With the ancient pastime enjoying a most successful season, the name of Nelson proved a magnet to the fans, for the tall Texan consistently turned in scores that might lead one to believe our present-day pros were competing on Tom Thumb courses.

When "Mr. Golf" walked off the icy Glen Garden course last December with a 273 (only 11 shots under par) he brought his year's earnings in War Bonds to \$86,528 and broke the record he had set the year before when he won \$46,600. His triumph in the Fort Worth open was all the more noteworthy because it came in his first competition after a two-month layoff.

It was little wonder then that the smiling Texan again was picked as our nation's leading male athlete of the year, the Associated Press poll giving him the No. 1 spot over such great performers as Doc Blanchard, Army's powerful All-America full-back, and Hal Newhouser of Detroit, baseball's outstanding pitcher.

The Toledo umbrella salesman won nineteen major P.G.A. tournaments in 1945—quite a feat when one considers that no pro ever had won more than six major tourneys in one season.

Byron repeated in the All-American open at Tam o' Shanter in Chicago with a 269, nineteen strokes better than his closest rival, for his fourth triumph in the tournament's five-year history, and also kept his title in the Victory open at Calumet. The P.G.A. championship, one of the few that had been eluding him, also fell his way when he conquered Sammy Byrd by a score of 4 and 3 in the final round. The former caddie also captured the Canadian open with a 280 and the Canadian P.G.A. test, shooting a record 268 in the latter.

Listed among his many other feats was a competitive 72-hole mark of 259 made in the Seattle open, that score clipping two strokes from the record made by little Ben Hogan, another Texan, only two weeks before. Nelson had established a standard of 263 in winning Atlanta's Iron Lung tournament earlier in the year. So it would seem this links wizard tolerates no poaching on his record grounds—if any rival breaks a record of his, Nelson comes right back and provides a tougher mark to shoot at.

Nelson was paired with Sammy Snead in a two-day match for the benefit of the P.G.A.'s Rehabilitation Fund for Wounded, and they divided honors, Nelson annexing the match play by 4 and 3 after the hard-hitting Virguman had won the medal play by 143 to 144 the day before.

Jug McSpaden of Sanford, Me.; Hogan, who rejoined the divot-diggers after a hitch in the service; Byrd, and Snead, who broke an arm in June, were among the other leading pros during the season.

Art Doering of Denver won the All-American test for amateurs, with women's laurels going to Lieut. Patty Berg of the Marines. Ellis Knowles of Apawamis and Mrs. S. H. Bird of Tamarack captured U.S. senior honors; Mrs. Estelle Lawson Page of Chapel Hill, N.C., annexed North-South laurels and Miss Kathleen Byrne of the Westchester Country Club won the New York State championship.

Mrs. Mildred Didrikson Zaharias of Los Angeles retained the Western open title, but lost her Western amateur crown to Miss Phyllis Otto of Atlantic, Iowa, and much to the surprise of many close observers of women's sports Mrs. Zaharias was picked in the Associated Press poll as the woman athlete of the year. Frank Strafaci of Shore View won the Metropolitan amateur title, with

the Metropolitan P.G.A. crown going to Clarence Doser of Scarsdale.

Ohio State triumphed in both the Western Conference and National Collegiate Association tournaments and Army was the leader in Eastern intercollegiate play.

THOMAS V. HANEY.

GRAZING SERVICE. A branch of the U.S. Department of the Interior, which administers grazing on 142,000,000 acres of Federal Range in order to protect the lands, permit the highest use of forage and other resources, and at the same time retard soil erosion and facilitate flood control. Director in 1945: Clarence L. Forsling.

GREAT BRITAIN. Official designation for the political union embracing England, Scotland, and Wales. Capital, London. Sovereign, George VI, who succeeded to the throne upon the abdication of Edward VIII on Dec. 10, 1936, and was proclaimed King on Dec. 12, 1936. Great Britain, together with Northern Ireland, the Isle of Man and the Channel Islands, forms the United Kingdom of Great Britain and Northern Ireland. For statistical purposes the Isle of Man, The Channel Islands, and in some cases Northern Ireland, are included under Great Britain. The area of Great Britain is 89,041 square miles. See BRITISH EMPIRE; IRELAND, NORTHERN.

Government. The United Kingdom of Great Britain and Northern Ireland is a limited monarchy with an unwritten constitution, under which final legislative, judicial, and administrative authority is vested in a Parliament of two houses, acting through a cabinet drawn from its members. The House of Commons consists of 640 members elected by universal suffrage on the basis of one member for every 70,000 of the population. The House of Lords has more than 800 members, including minors not seated. Seven new Labor peers were named in Oct. 1945.

Polling for the first general election since 1935 was held on July 5, 1945, and the results announced on July 26. In a marked swing to the left, Great Britain replaced its former Coalition (largely Conservative) Government under Winston Churchill with a Labor Government headed by Clement R. Attlee. The new standing of the Government parties in the House of Commons following this election is as follows: Labor, 393; Liberal, 10; I.L.P., 3; Communist, 2; Irish Nationalists, 2; Common Wealth, 1; Independent, 3. The Opposition consists of 198 Conservatives, 1 National, 13 Liberal Nationals and 1 Liberal.

Members of Attlee's cabinet, as of Aug. 25, 1945, were: Lord President of the Council, Herbert Morrison; Secretary of State for Foreign Affairs, Ernest Bevin; Lord Privy Seal, Arthur Greenwood; Chancellor of the Exchequer, Hugh Dalton; President of the Board of Trade, Sir Stafford Cripps; Lord Chancellor, Lord Jowitt; Secretary of State for the Home Department, James Chuter Ede; Secretary of State for Dominion Affairs, Viscount Addison; Secretary of State for India and Burma, F. W. Pethick-Lawrence; Secretary of State for the Colonies, George Henry Hall; First Lord of the Admiralty, Albert Victor Alexander; Secretary of State for War, John James Lawson; Secretary of State for Air, Viscount Stansgate; Secretary of State for Scotland, Joseph Westwood; Minister of Labour and National Service, George Alfred Isaacs; Minister of Education, Ellen Wilkinson; Minister of Health, Aneurin Bevan; Minister of Agriculture and Fisheries, Tom Williams.

Events, 1945. For Britain the year opened with rocket bombs causing 2,000 casualties a month and the Battle of the Bulge a source of deep anxiety. The 12 months ended with the country at peace; and although food and clothing were still scarce and living in general still austere, a new Labor Government, relatively young in years, was confident of seeing prosperity return before many more months should have passed.

Three-quarters of a million men and women in the services were war casualties, a third of them dead; 2,570 ships with a tonnage of more than 11,380,000 were gone. But when the end of the war with Germany came on May 8, Prime Minister Winston Churchill was able to say with truth that "neither the long years, nor the dangers, nor the fierce attacks of the enemy, have in any way weakened the independent resolve of the British nation," and to spur on his hearers to the prosecution of the war in the Pacific.

The new freedom was quickly used. On June 8 the King and Queen visited the freed Channel Islands, and on July 5 the King opened the Manx Parliament, the Tynwald, in a ceremony which can be traced back for more than a thousand years. The general election was held and the Churchill Government swept out of power by a Labor landslide. President Truman, returning from the Potsdam Conference on the treatment of defeated Germany, boarded H. M. S. *Renown* in Plymouth Harbor for luncheon with King George. Finally the surrender of Japan was a certainty, and the new Parliament took up its duties of reconstruction on August 15, the day after the capitulation.

Parliament under Churchill. The House of Commons under Churchill in the spring of the year clearly saw the approach of the war's end, the necessity of world organization and the tasks of internal reconstruction. When Churchill met with President Roosevelt and Marshal Stalin at Yalta in the first part of February the threat of the Battle of the Bulge was gone. Parliament, after a three-day debate on the Yalta Declaration, endorsed it unanimously on March 1.

Churchill was soon to refer to his meeting with Roosevelt at Yalta in sadder circumstances. April 17 was a day given over to services in memory of the late President. Churchill, in the House of Commons, spoke of his personal anxieties in the President's behalf at Yalta. The services at St. Paul's Cathedral were attended by the King and the members of the Royal Family, Queen Wilhelmina of The Netherlands, King Haakon of Norway, King George of Greece, King Peter of Yugoslavia, the President of Poland, and many other official persons and representatives.

After the surrender of Germany Churchill proposed that the Coalition Government should continue in office until after the end of the war in the Pacific, but Attlee rejected the proposal. Consequently, in order to force a general election, Churchill resigned on May 23. He was at once reappointed by the King as Prime Minister of a "caretaker" government to act through the period covering the dissolution of Parliament on June 15, the polling on July 5 and the announcement of the results on July 26.

The cabinet selected by Churchill to serve with him for the period retained the main strength of the predominating Conservative Party, together with leaders of the Liberal Nationals and industrialists who had been serving in the Government. Anthony Eden's work in the Foreign Office and Sir John Anderson's as Chancellor of the Exchequer was not interrupted. One of the few sur-

prises was the substitution of Richard Austen Butler for Ernest Bevin as Minister of Labor and National Service. There was little accent on youth but a good deal on the kind of team which could carry out the tasks of reconstruction if reelected.

On June 15 this Parliament, the 37th of the United Kingdom and the fourth longest, was dissolved. It had both made and survived history. In Churchill's words, the House of Commons of this Parliament had not only preserved the title deeds of democracy in perilous times, but also "proved itself the strongest foundation for waging war that has ever been seen in the whole of our long history." It developed the technique of submitting a broad outline of policy in White Papers and instituted many changes in harmony with the needs of the times, including the new Education Act. At the time of dissolution the Conservatives had 358 of the 615 seats, Labor 164 and Liberal Nationals 26.

General Election. The election campaign was a bitter one. Churchill's campaign speeches were unusually vigorous, and marked in particular by attacks upon Professor Harold Laski, chairman of the British Labor Party, and by vivid threats of a Gestapo rule if the Labor Party should win. *The Times* (London) remarked on June 5 that his presentation of the Socialist vs. individualist issue was artificial and that the country, which had had a Socialist Government once, was not really frightened of having one again. *The Economist* (London) said on July 7, when the polling was over, that "the Conservatives have resorted to stunts, red herrings, and unfair practices to an extent that has disgusted many of their friends and followers," and that "Mr. Churchill's harping on the Laski theme in the last few days before the poll was nothing but an unworthy stunt, as insulting to the intelligence of the electorate as it was to the patriotism of the Labor leaders."

Perhaps Churchill overplayed his hand. Or perhaps, as seems more likely, the electorate was convinced that the tasks of reconstruction needed different men and points of view from the tasks of war so successfully accomplished. At any rate, Labor won by a landslide. The party's representation of 164 in the former House of Commons was increased to 393, making it the strongest party of all, with an independent majority of 157 over all other parties and groups combined. The Conservative Party's strength was reduced from 358 to 198. Little was left of the ministers in the former government, for 32 of them lost their seats. Liberal Nationals (13) and Liberals (11) almost vanished from the British political scene. None of the minor parties got more than 3 seats.

Churchill at once drove to Buckingham Palace and tendered his resignation as Prime Minister. Very soon after he left, Attlee arrived at the Palace and accepted the King's invitation to form a ministry. Major Clement R. Attlee did not work up from the ranks, but via Haileybury School, University College (Oxford), the law, a lectureship at the London School of Economics, and distinguished service in World War I. But his cabinet Ministers included Herbert Morrison, son of a London policeman, as Lord President of the Council, Ernest Bevin, odd job boy, as Foreign Secretary, and Walter J. Edwards, former Royal Navy stoker, as Civil Lord of the Admiralty.

Empire and Foreign Policy. The Churchill Government left to Attlee and his ministers a considerable legacy in Empire, colonial, and foreign policy, sufficiently difficult of solution even before the use of the atomic bomb and the surrender of Japan

complicated the external tasks of the new Prime Minister. The Colonial Development and Welfare Act of January, 1945, the offer of eventual dominion status to Burma in May, and the continuing negotiations with India, one important aspect of which was the White Paper of June 14 asking India to plan self-rule with a revised Executive Council—all these presented problems of continuing and possibly increasing perplexity. (See articles on BRITISH EMPIRE, BURMA, and INDIA.) In addition, British intervention in Greece and the Levant left a residue of delicate relations with the interested powers as well as with the inhabitants of the regions directly affected.

Relations with Greece. Churchill's trip to Greece in the last days of December, 1944, and the agreement made there that Archbishop Damaskinos should be appointed regent were in essence approved by the House of Commons on January 19 when a vote of confidence in the Government's policy on Greece was carried by 340 to 7. In February the reports of Rex Leeper, British Ambassador in Athens, on the treatment of hostages by ELAS (National Popular Liberation Army), together with other letters on the subject, were published as a British White Paper. Harold Macmillan, Minister Resident in the Mediterranean Theater, was present at the signing of an agreement between the Greek Government and the Central Committee of EAM (National Liberation Front) early in February. From January to June a British trade union delegation worked with Greek trade union factions and induced them to come to an agreement, form a central body, and hold elections.

British Communists, meeting in their annual congress in November, demanded the removal of Bevin as Foreign Secretary because of his attitude towards Greece and the Soviet Union. The chairman of the British group in the Allied Mission for observing the Greek election in 1946 was T. T. Windle, secretary of the London branch of the Labor Party.

Intervention in the Levant. On May 31 Churchill ordered the British Commander-in-Chief in the Middle East to intervene in Syria and Lebanon, where fighting between local forces and the French had been going on for some days. In spite of the imminence of the general election the move was endorsed by Attlee. General de Gaulle was critical of the action in the French Assembly on June 19, saying that for four years Britain had intervened in Syria in a manner damaging to French authority and interests. The Labor Government was able to announce a diplomatic victory at the end of the year, when Foreign Secretary Bevin, speaking in the House of Commons on Dec. 13, made public the terms of an agreement between the Governments of Great Britain and France providing for removal of their troops from the Levantine states and for mutual support on Middle Eastern questions.

Britain at San Francisco. One of the less explosive tasks of the year in the international field was participation in the conference at San Francisco and in subsequent meetings of United Nations commissions and agencies. There was, to be sure, some dissatisfaction in the Labor Party when it was announced that Foreign Secretary Eden and not Deputy Prime Minister Attlee would serve as leader of the British delegation, but the issue was allowed to die down. Eden's effectiveness as one of the four presiding chairmen and in his relations with the press was marked, and his departure from San Francisco because of illness called forth expressions of regret beyond the requirements of diplomatic usage.

The British delegation, which was an all-party one, gave outward signs of harmony and cooperation. The delegates had been told in the House of Commons on April 17 that the proposed constitution would produce no utopia. Attlee and Lord Cranborne, leader of the House of Lords, said that they were going to San Francisco with open minds and advised the public to expect no miracles of perfectionism. Possibly because of these influences the role of Britain at San Francisco was less conspicuous than had been anticipated. The delegation supported the Americans in admitting Argentina and the Russians in accepting White Russia and the Ukraine. Governmental representatives appeared warmer in supporting the United Nations Relief and Rehabilitation Administration, which held a council meeting in London later in the summer.

Prime Ministers at Potsdam. The presence of Attlee at the "Big Three" Potsdam Conference on German reparations in July had been for some weeks a matter of definition in British politics. In the course of the election campaign Harold Laski, Chairman of the National Executive Committee of the Labor Party, stipulated that Attlee, although Deputy Prime Minister, could attend as an observer only. Laski wrote that the Labor Party "rejected the Tory doctrine of the continuity of foreign policy" and would not be "bound by the decisions which Mr. Churchill and Mr. Eden choose to accept." Churchill took a hand and said that he had hoped that Attlee would act as "friend and counsellor" and that the British delegation would work together as they had at San Francisco. Attlee's position was that the chairman of the Labor Party had no right to give him instructions.

Attlee of course went to Potsdam with the other members of his delegation, but the precise part that he took was not described. He returned with Churchill and Eden to receive the election returns on July 26. Neither Churchill nor Eden went back to Potsdam after their defeat, and Attlee with Ernest Bevin as Foreign Secretary took up the task of policy making. It was reported that both were fresh and vigorous participants.

Ministerial Tours. Another task taken up by the new Prime Minister and his Foreign Secretary was that of going to any part of the world where important negotiations involving their country were undertaken. Churchill's record in 1945 included Malta on February 2; Yalta, with Eden, February 4-11; Greece and Egypt later in the month; Field Marshal Montgomery's headquarters and a section of reconquered Germany in March; a vacation in Southern France after the polling on July 5, and Potsdam with side trips to Berlin. At the end of July Churchill, instead of going back to Potsdam, declined the Order of the Garter and went house-hunting.

Attlee had been in Paris and Brussels early in March to discuss with the French and Belgian Governments the speeding up of British supplies for civilians. The next important task fell to Foreign Secretary Bevin, and it was performed at home—that of representing his country at the ill-starred Council of Foreign Ministers in London in September. He conspicuously failed to attain sympathy with Soviet Foreign Commissar Molotov, and was said to have twitted Molotov about the latter's bourgeois origin as compared with his own proletarianism.

The meeting of the foreign ministers of Britain, the United States, and the U.S.S.R. in Moscow in December ended more satisfactorily, with agreement reached on action in many of the disturbed

areas of the world and on a proposed method for international control of atomic energy. On returning to London on Dec. 28 Bevin said that he felt that the three foreign ministers had "done a very good piece of work."

Prime Minister Attlee was in Washington in November for a conference with President Truman and Prime Minister King of Canada on atomic energy control, and with them issued a joint statement on Nov. 15 providing for keeping manufacturing processes secret until the UNO should set controls for the peaceful use of atomic energy. On Nov. 17 he reached Ottawa with Prime Minister King and later addressed both houses of Parliament. On Nov. 20 Attlee was back in London where House of Commons affairs, especially those concerned with the Labor Government's nationalization program, demanded his attention with increasing urgency.

Oil Pact with U. S. A new Anglo-American oil agreement which, it was hoped, would serve as a basis for a multilateral agreement to which the Soviet Union and other governments would affix their signatures, was signed in London on Sept. 24 by Harold L. Ickes, United States Petroleum Administrator, and Emanuel Shinwell, British Minister of Fuel and Power. The agreement was a revision of the Anglo-American agreement on petroleum signed in Washington in August, 1944 but withdrawn by President Roosevelt in January, 1945, because of opposition in the United States Senate.

In the new agreement the American unwillingness to accept international regulation of the domestic oil industry and the British reluctance to consent to control of overseas sources of supply if that important exception was made were both recognized, and the agreement was correspondingly limited in scope. It provided for setting up an Anglo-American Petroleum Commission and aimed at the eventual negotiation of an international petroleum agreement.

Other Foreign Problems. Prime Minister Nokrashi Pasha of Egypt told the Egyptian Parliament on Nov. 12 that Britain had been asked to withdraw all troops from Egypt and to give up the control she exercised with Egypt in the condominium of the Anglo-Egyptian Sudan. Egypt became a sovereign state by the Anglo-Egyptian treaty of 1936 and British military occupation was terminated. However, British troops which entered Egypt when the latter's sovereignty was threatened had not yet been removed. The issue was again pressed in the Egyptian Parliament on December 2 by Makram Ebeid Pasha, Minister of Finance and leader of the dissident Wafdist party.

It was clear in December that the Labor Government resented American official and press criticism of British relations with Siam, with whom a British treaty was about to be signed. Hector McNeil, speaking in the House of Commons on December 20, said that "in view of the very misleading and tendentious statements which have recently appeared in the foreign press" he welcomed the opportunity of expressing the Government's friendly intentions towards Siam as an independent country. British-Dutch conferences on Indonesia which ended on December 28 appeared inconclusive, but there was evidence that British policy of cooperation with the Netherlands was not yet modified and that the two governments agreed that the conditions of law and order necessary for Indonesian home rule were far from attainment.

A review of the Labor Government's foreign policy was given in the House of Commons by Bevin on Nov. 23, in reply to a debate. The

Foreign Secretary announced the British Government's decision to retain parts of the Middle East Supply Council, spoke cautiously of events in Persia, described the progress of negotiations for the withdrawal of British and French troops from Syria, and emphasized that British action in Indonesia was taken in pursuit of a general mandate accepted on behalf of the United Nations. He devoted a considerable part of the review to the situation in Greece and defended the advice to postpone the plebiscite to 1948.

Anglo-American Financial Talks. The international negotiations of the year which attracted the widest attention in the United States (outside of questions of war and peace) were the British-American financial talks which began in Washington in September and concluded with the loan agreement between Britain and the United States signed on Dec. 6. The two greatest trading nations in the world were involved and intricate questions of long-run financial and commercial policy were under consideration.

Lend-Lease operations were halted by order of President Truman on August 21 and the export-import situation of Britain at once became an acute issue. Food gifts from the Dominions increased in amount after this time, but welcome as they were, they could be no more than palliative and without relation to the long-run problem of restoring Britain's prewar buying power abroad. Negotiations for an American grant or loan were opened in Washington on September 11 when the British and American delegations met at the State Department and agreed that the agenda would include financial problems, Lend-Lease termination and settlement, commercial policy, and surplus property disposal abroad. In the absence of Secretary of State Byrnes, Assistant Secretary of State William L. Clayton was chairman of the American group. The British delegation included Lord Keynes, British Ambassador Lord Halifax, and Robert H. Brand, head of the Treasury group.

Britain's International Position. The purpose of the conversations was to devise means by which Great Britain could secure goods necessary for her reconstruction and the revival of her peacetime industry and foreign trade. Her position was as follows, according to a White Paper issued on December 6, containing figures used in the conversations: In the course of the war she had liquidated most of her foreign assets and become a debtor nation. In that period £1,118,000,000 of foreign investments were sold and debts owed abroad increased from £760,000,000 to £3,335,000,000. These liabilities, mainly in the form of balances owed within the sterling area, showed as their largest item obligations to India, Burma and the Near East, which amounted to £1,732,000,000.

In order to pay for the prewar volume of imports into Britain, the volume of exports must be increased by 50 per cent, taking into account the decline in income from other sources abroad. Allowing for other factors, however, such as the repayment of war and postwar debts and changes in the population, the necessary level of exports might in fact be nearer 75 per cent above the prewar level. Restoring home production to furnish exports with which to pay for necessary imports was the long-run financial problem.

Points at Issue. An issue which came up early in the negotiations was the possible acceptance by Britain of the necessity of scaling down those of her debts owed to the sterling countries, to correspond with the partial cancellation of Lend-Lease obligations to the United States which would undoubt-

edly take place. Asking such countries as India and Egypt for this concession, in view of the respective political situations, would undoubtedly involve delicate dealings for Britain.

As negotiations continued into October, American pressure appeared to turn towards requiring Britain to abandon imperial preference as a condition of obtaining a loan. There were sharp reactions from the self-governing Dominions when this proposal became known, since the Dominions are independent in their trade policy. In the course of the conversations the British Government approved in principle the American proposals for an international trade charter and an International Trade Organization, to be developed at a United Nations conference on trade and employment to be held in 1946.

When Sir Edward Bridges, permanent Secretary of the British Treasury and Secretary to the Cabinet, arrived in Washington on December 1, it was apparent that negotiations were drawing to a close. On December 6, the agreement was signed in Washington by Lord Keynes, Lord Halifax, Secretary of State Byrnes, and Secretary of the Treasury Vinson.

Terms of the Agreement. The terms provided for a loan of \$3,750,000,000 to be repaid by the year 2001. Interest at 2 per cent is to begin in 1951. The line of credit of \$3,750,000,000 may be drawn upon by the United Kingdom up to Dec. 31, 1951. Lend-Lease obligations were set at the nominal sum of \$650,000,000, to be repaid in the same way as the line of credit.

The United Kingdom agreed to scale down certain sterling debts and to relax import and exchange controls, including exchange arrangements affecting the sterling area. The two governments issued a separate joint statement asserting their intention to relax trade barriers of all kinds.

Reception in Britain. The loan agreement could become effective only after action by the British Parliament and the United States Congress. In the House of Commons bills to approve the Bretton Woods Agreements and the Loan Agreement were promptly introduced. After two days of gloomy debate the loan bill was approved 345 to 88 and the Bretton Woods bill by a vote of 314 to 50.

The Opposition in the House of Commons emphasized dislike of the gold standard, resentment against American high tariff policy, fear of being engulfed in the economic depressions characteristic of the American economy, and doubt as to Britain's being able to carry out the obligations. In the House of Lords opposition to the terms of the loan was far stronger and many members boycotted the issue by refusing to vote. The loan bill was carried by a vote of 90 to 8. Resentment against the terms of the loan appeared to be general in Britain, but no clear alternative to accepting it presented itself.

Labor's Nationalization Program. The central point of interest in the policy of Britain's new Labor Government, both inside the country and abroad, was its nationalization program. In the King's Speech at the state opening of Parliament on August 15 (Parliament had held a brief first meeting on July 31) it was announced that bills would be introduced to nationalize the Bank of England and the fuel and power industries and to organize air transport, and that machinery would be set up to provide for the effective planning of investment. The Government would secure "by suitable control or by an extension of public ownership that our industries and services shall make their maximum contribution to the national well-being."

From the public's point of view the two pivotal

nationalization projects were: that for the Bank of England, public ownership of which had long been a cherished tenet of the Labor Party's creed; and that for nationalization of coal mines, since the industry was old, sick, and a prolific source of legitimate unrest and dissatisfaction. The Bank bill came first, on October 9. Nationalization is to be accomplished by the issue of government stock in exchange for that now held by the shareholders, with a guarantee to the shareholders of the same income for the next 20 years that they received from their previous holdings over the past 22 years. The Governor, Deputy-Governor, and directors will in future be appointed by the Crown, but the present Governor, Lord Catto, is to remain "for an appropriate period."

The bill obviously makes little change, at least for the time being, in the position of the Bank of England. *The Economist* (London) commented on the bill on October 13 in these words: "The scrupulous care that is taken in the bill to change nothing of any account is the best proof that the members of the Government do not believe the accusations that their Party has so often brought against the Bank of England."

The text of the coal mines nationalization bill, published on December 20, provides that a 9-member National Coal Board, with full powers to carry out all operations involved in production and distribution, under general policies laid down by the Ministry of Fuel and Power, will take title to the coal industry. The coal industry was already partly nationalized when this bill was introduced. In accordance with the provisions of the Coal Act of 1938 the Coal Commission took over rights and royalties from their owners on July 1, 1942, and the owners were compensated by the Government. On July 19, 1945, British mine owners accepted a Government plan for close supervision of the industry to compel modernization. There was a provision in this plan, however, that private enterprise should be preserved. But government ownership of coal mines was one of the major planks in the Labor Party's election program and it was just one week later that Labor's election victory was announced.

A plan to organize the cable and wireless communication services of the Empire under public ownership was announced on Nov. 1 in the House of Commons by Chancellor of the Exchequer Dalton, and on the same day Lord Winster, in the House of Lords, made public the Government's plan for the organization of three public corporations to operate all scheduled civil air services. In the House of Commons Ivor Thomas, Parliamentary Under Secretary for Civil Aviation, told members that it was "the object of the Government to make air travel a normal mode of travel for the masses and not a luxury for the few."

This was as much as the Opposition could endure (although the nationalization of the gas industry was to be recommended on December 4) and when Herbert Morrison, Lord President of the Council, disclosed to the House of Commons on Nov. 19 a 5-year nationalization plan the opponents became rather noisy. The situation was not ameliorated by Morrison's refusal to have a debate. The Conservative complaint was that the Government was going far beyond the King's Speech, although it was obvious that it was not going beyond the election program.

Conservative tempers remained high, however. It was at this juncture that Prime Minister Attlee returned from his atomic energy talks in Washington. A two-day debate on policy in early December

ended on Dec. 6 with a Government victory of 381 to 197. Former Prime Minister Churchill had been at his most pungent, but Attlee's incisive and occasionally humorous address just before the vote greatly enhanced the latter's prestige.

Production Problems. The problem of increasing Britain's industrial and agricultural production could wait neither for nationalization measures nor for financial aid from abroad. Britain's staple industry, cotton manufacturing, which for many years had been nearly as sick as coal, finally decided to accept a plan proposed in October by Sir Stafford Cripps, President of the Board of Trade. The proposal involved setting up tripartite "working committees" for such industries as were willing to cooperate. Agricultural producers were encouraged by the announcement on Nov. 15 by Thomas Williams, Minister of Agriculture, that the Government would assure markets and guarantee prices and would promote to the fullest the home production of good food.

Freight movements in the London area were hampered by a "go-slow" strike by dockers in June and July, but a more serious set-back came with a dock strike which broke out in Birkenhead on Sept. 25, spread to all major ports involving 43,000 workers, and lasted until Nov. 5. In October the Government called out troops to unload strike-bound food ships. The return to work was on the basis of a 30-day truce for negotiating higher wages, a 40-hour week, decasualization, and welfare. On Dec. 11 the committee of investigation, appointed by the Ministry of Labor under the chairmanship of Mr. Justice Evershed, made an award of increased wages which was accepted by the workers.

Social Services. Housing continued to be the most pressing social and economic problem confronting the United Kingdom. The Labor victory in the election brought Aneurin Bevan to the Ministry of Health, with responsibility for the program, but progress was slow, partly because of the continuing labor shortage.

The extension and coordination of Britain's social insurance system also made headway slowly in 1945. The Family Allowances Bill, providing for postwar grants of 5 shillings weekly for each child after the first or only child, passed successfully through Parliament in the spring. In the autumn the Labor Government's bill to place compensation for industrial accidents on the basis of a contributory service was also approved.

Demobilization and Decontrol. Demobilization of the service forces began on June 18 and by the end of July the weekly release rate reached 24,000. After the end of the war with Japan repeated revision of plans was necessary. By the middle of December it was apparent that a Government plan announced in October for bringing home 1,500,000 men and women from the military service by the end of the year would be realized.

Opposition spokesmen criticised the use of 1,450,000 men and women in producing war equipment and supplies at the end of the year, as well as the official reluctance to remove controls. Bevin's last act before leaving the Churchill Government was his order of May 28 relaxing control over the hiring of labor, but control over employment itself was not relieved until Dec. 20, when some 3,500,000 men and women were freed from direction of their employment. Scarcities of clothing, fuel, and food remained serious, although some slight food concessions were granted for Christmas.

The Budgets. Britain had two budget days in 1945, one on April 24 under the Coalition Government

and the second on Oct. 23 under the Labor Government. The first budget, recognized as an interim measure, carried only slight tax relief. Sir John Anderson, Chancellor of the Exchequer, told the public that conditions would remain difficult and that they could not expect to go on a spending spree after the end of the war in the Pacific.

The budget presented by Labor Chancellor of the Exchequer Hugh Dalton took a shilling (5 per cent) from the income tax in 1946, increased the surtax, reduced the excess profits tax from 100 to 60 per cent but removed postwar credits, abolished the purchase tax on certain household equipment, and reduced the tax on motor vehicles. Dalton warned that civil expenditures would increase in the coming months.

Other Events. Earl Lloyd George of Dwyfor, born David Lloyd George, whose name headed the New Year's Day honors list as the recipient of an earldom, died at his home in Caernarvonshire, North Wales, on March 26. Lloyd George spent 52 years in the House of Commons as Liberal member from Caernarvon, and was Chancellor of the Exchequer and Prime Minister in World War I as well as servant of his country in many other capacities in the course of his long public life. Earl Lloyd George's second son, Major Gwilym Lloyd George, was Minister of Fuel and Power in the Churchill Government.

Treason trials were one of the unpleasant but necessary consequences of the reopening of frontiers after the end of the war. William Joyce ("Lord Haw Haw") and John Amery, prodigal son of Leopold S. Amery, former Secretary of State for India, both of whom had broadcast from the Continent for the enemy, were tried for treason in British courts and sentenced to death.

Population Trends. The population of Great Britain increased from 44,937,444 in 1931 to 46,607,000 (estimated) in 1941. A provisional birth-rate of 18.0 per thousand in England and Wales in 1944 was the highest recorded since 1925. The death rate for the same year, 11.9, was below that for 1943 but higher than that for 1942. The infant mortality rate of 46 per thousand was the lowest ever recorded.

Religion and Education. The Church of England with an Episcopal form of government, and the Church of Scotland (Presbyterian) are the "established religions" in England and Scotland respectively. The leading denominations in England and Wales according to membership are the Anglican, Roman Catholic, Methodist, Congregationalist, Baptist, and Calvinistic Methodist. In Scotland the leading denominations are the Presbyterian and Roman Catholic.

Elementary education is provided free throughout Great Britain, and under the heading of "elementary education" are included large numbers of senior and central schools providing education of a secondary grade. At the age of 11 some children, usually chosen by examination, pass on to secondary schools, where they receive an education designed for entrance to professional positions or for university life. Other selected children pass into central schools, which usually include some vocational work, and the unselected children enter senior schools or senior classes. In Scotland all forms of post-primary education up to 18 are provided free, except in a few schools, while in England and Wales modest fees are charged. Outside of this system are the "public" (endowed) schools.

There are 11 universities in England, 4 in Scotland, and 1 in Wales. About two-fifths of the university students are assisted by the state in normal

times. Extensive reorganization of the educational system has been undertaken by both the Coalition and Labor Governments.

Production. Detailed statistics of agricultural, mining, industrial and other production were withheld during World War II. In the course of the war, agricultural production was increased until it supplied two-thirds to three-fourths of home food needs as compared with approximately one-third before the war. Emphasis was put on prewar crops, including potatoes, sugar beets, vegetables, wheat, oats, and barley.

Before the war iron and steel, textiles, and coal were the staple products of British industry, with chemicals, machinery, electrical products, engineering products, and other specialties showing increased activity. Accounts of the production of individual war industries were made public in the autumn in *The Times Record of British War Production, 1939-1945*. From 1939 to 1944 the number employed in munitions rose from 1,150,000 to 4,300,000, and the total number of men and women in the services or in industry increased from 18,500,000 to 22,000,000.

Foreign Trade. Britain's export trade in the third quarter of 1945 failed to reflect any results of the world-wide trade expansion program undertaken by the Government. Exports fell off in comparison with the second quarter of the year, and stood at £272,000,000 for the first 9 months of 1945, compared with £188,000,000 for the corresponding period in 1944, and £353,000,000 in 1938.

Imports, on the other hand, continued to stand above the prewar level. Imports in the first six months of 1945 were at the rate of £1,150,000,000 a year, as compared with £858,000,000 in 1938. This situation, taken in connection with Britain's loss of income from overseas investments, accentuated the problem of maintaining foreign purchases which was already apparent and which entered into the Anglo-American loan negotiations.

ALZADA COMSTOCK.

GREECE. A Balkan state, occupied by Axis troops from April-May, 1941, until October, 1944. Capital, Athens. Greece has an area of 50,147 square miles (mainland, 41,328; island, 8,819). The population was estimated at 7,200,000 in 1941 (7,338,000 at 1940 census). Estimated populations of the chief cities in 1939 were: Athens, 392,781; Piraeus, 198,771; Salonika (Thessaloniki), 236,524; Patras, 61,278; Kavalla, 49,980; Canea, 26,608; Corfu (Kerkyra), 32,221.

Religion and Education. School attendance in 1937-38 was: Elementary, 985,018; secondary, 92,687; university, 7,998. The 1928 census returns showed 5,961,529 members of the Greek Orthodox Church, 126,017 Moslems, 72,791 Jews, 35,182 Roman Catholics, and 9,003 Protestants.

Production. Previous to the war about 54 per cent of the working population was supported by agriculture and fishing, 20 per cent by industry, and 8 per cent by commerce. The country was dependent upon imports for more than 25 per cent of its total food consumption and for 40 per cent of the wheat consumed. Wheat production declined from the prewar average of 700,000 metric tons to an estimated 368,300 tons (this is exclusive of the output of Thrace and Eastern Macedonia). Estimated yields of other crops in 1940, except as stated, were (in metric tons): tobacco, the main cash crop, 45,000; currants, 121,775; raisins, 23,000; figs (exportable crop), 22,000; barley, 239,500; oats, 174,200; rye, 57,900; olive oil, 80,000 tons in 1942-43; ginned cotton, 16,900; potatoes, 163,300 in 1939;

corn, 261,500 in 1939; wine, 64,130,000 U.S. gal. in 1942.

Factory production in 1938 (excluding wine, olive oil, and wheat products) was valued at 13,552,000,000 drachmas. Mineral output included iron ore, pyrites, lignite, manganese, lead, zinc, chrome, and nickel-cobalt.

Foreign Trade. In 1941, imports were valued at 4,840,000,000 drachmas (12,215,326,000 in 1940) and exports 3,904,000,000 drachmas (9,079,380,000 in 1940). Chief sources of 1941 imports (millions of drachmas): U.S.S.R., 673; Germany, 544; United Kingdom, 354; others, 3,269. Distribution of exports (in millions): Germany, 1,825; U.S.A., 904; United Kingdom, 486; Italy, 141; others, 548. Exports included raisins, tobacco, olive oil, wine. Imports included wheat, barley, rice, sugar, coal, mineral oils.

Finance. In 1941-42 revenue amounted to 16,500,000,000 drachmas; expenditure, exclusive of occupation costs, 30,300,000,000 drachmas (this includes the amounts of interest due on foreign debts but not paid). Estimates of the cost of Axis occupation levied on Greece varied from 18 to 180 billion drachmas annually, the latter figure including credits extended to the Axis countries by the puppet regime in Athens.

German exactions and rapidly spreading inflation boosted the public debt far above the 95-billion-drachma level reported for Sept. 30, 1940. The average exchange rate of the drachma was \$0.0082 in 1939. German authorities fixed the official rate at 1 drachma equals 0.0167 reichsmarks, or \$0.0067 (based on the German official rate for the U.S. dollar). The quotation for the pound sterling, which was 1,500 drachmas before the German occupation, was reported at 42,000 drachmas in April, 1942, and 130,000 drachmas in July, 1942.

Transportation. In 1940 Greece had approximately 1,864 miles of railways, 8,440 miles of highways, air connections from Athens to most of the principal European cities, and a merchant fleet of some 607 vessels (of 100 tons or over) aggregating about 1,780,700 gross tons. Much of the transportation and communication network was disrupted or destroyed by the Italo-German invasions of 1940-41. Half the merchant marine was destroyed or captured during the same period. The remainder (about 200 ships of 1,000,000 tons manned by 6,000 sailors) entered the service of the Allies under British direction.

Government. Premier John Metaxas administered Greece as a dictatorship from Aug. 4, 1936, until his death on Jan. 29, 1941. The government remained a monarchy in form under King George II, who had been restored to the throne Nov. 25, 1935, in accordance with a plebiscite, to rule under the Constitution of 1911. King George signed the 1936 decrees which suspended constitutional guarantees, dissolved Parliament, abolished political parties, and imposed strict control over the press and other means of communication. Thereafter, all legislation was enacted by royal decree.

According to a resolution passed by the Greek National Assembly Oct. 10, 1935, the 1911 Constitution was to remain in force until the enactment of a new Constitutional Charter. King George on Oct. 22, 1941, issued a royal decree regulating the functions of state authorities in cases in which the 1911 Constitution could not be fully applied owing to the absence of the Government from Greece.

Italian forces invaded Greece Oct. 28, 1940, and were driven out by the Greek Army, which advanced and occupied one-third of Albania by Apr. 6, 1941, when the German invasion of Greece be-

gan. The Greek armed forces were defeated and a British expeditionary force was expelled. King George, with members of the Government, left Athens April 22 and, after a temporary stay in Cairo, Egypt, was transferred to London, effective Sept. 22, 1941.

Axis forces were in control of Greece until 1944 when political and military events forced German and Bulgarian armed forces to leave and the whole country was cleared by Oct. 15, 1944. The Greek Prime Minister, M. Papandriou, arrived in Athens on Oct. 18, 1944. King George, on Dec. 30, 1944, set up a Regency to last during the period of emergency and until the will of the people should be known as to whether they desired a monarchy or a republic. Regent in 1945: Archbishop Damaskinos (sworn in, Dec. 31, 1944).

Events, 1945. The year 1945 found civil war raging in Greece. When the Germans withdrew early in October, 1944, they left the country in control of EAM (Ethnikon Apeleftherotikon Metopon, "National Liberation Front"), a resistance movement comprising various groups, with the Communists dominant in its direction. For more than a year EAM had been suspect to the British and the Greek government-in-exile, which was amenable to the British, because it was thought that the Communists in EAM planned to seize control of the government when the country should be liberated from the German occupation. British and Greek government forces which entered the country late in October, 1944, were inadequate in numbers and organization to take over the administration of the country at once. In order to establish its authority the government had to create a national army, and it demanded that "volunteer" military organizations, specifically ELAS, EAM's military arm, should disband. EAM refused to disband ELAS without assurances that it would not be victimized, and demanded in turn that the strongly royalist and anti-EAM units of the Greek army known as the Mountain Brigade and the Sacred Company likewise disband or, alternatively, that ELAS be allowed to retain forces equal in number to those units. Firmness on the part of the British resulted in the resignation on December 1 of the six ministers sympathetic to EAM, of whom two were Communists, and violence broke out on December 3. At first ELAS held the upper hand, the British and Greek government forces being confined to the few blocks in Athens lying between Syntagma and Omonoia Squares, but after the middle of December considerable British reinforcements arrived, and ELAS was forced to retire before superior forces equipped with aircraft, tanks, and other modern weapons. In their retreat from Athens ELAS carried off not only numerous military prisoners but also some thousands of civilian hostages, in retaliation, they alleged, for the thousands of civilian EAM sympathizers which the British had deported to Africa. The disposition of these hostages became a major issue in the subsequent peace negotiations.

On the last day of 1944, after Prime Minister Churchill had returned from a Christmas Day visit to Athens, Archbishop Damaskinos became Regent of Greece, and at the beginning of 1945 General Nicholas Plastiras, known as a convinced anti-royalist, became Prime Minister. On January 12 a truce was concluded between ELAS and the British commander, General Ronald Scobie. British and American public opinion, which had been disturbed by the use of armed force against even a recalcitrant section of a heroic allied people, was neutralized by reports of ELAS atrocities. Churchill

first characterized EAM as a band of "brigands from the hills," and later (January 18) declared that defections had reduced EAM to its "Communist or rather Trotskyist" core. The British and the Greek government declared that only avowed Communists could represent EAM at the peace negotiations. After long dispute first on the composition of the representation and then on the terms, agreement was reached at Varkiza, near Athens, on February 12. EAM was represented by George Siantos, Secretary of the Communist Party, Dimitrios Prtsalides, Secretary of EAM, and Ilias Tsirimokos, Secretary of the socialist organization called ELD (Enosis Laikis Dimocratias, "Union of Popular Democracy"). The government negotiators were John Sofianopoulos, Minister of Foreign Affairs, Perikles Rallis, Minister of Interior, and John Makropoulos, Minister of Agriculture. Of these Sofianopoulos is said to have been the most conciliatory and to have contributed most towards effecting an agreement. The agreement provided that (1) ELAS disarm, and surrender its weapons to a fixed number; (2) a new army would be formed, in which ELAS men might be enrolled without prejudice; (3) the Communist Party might continue as a legal organization and EAM continue political activity; (4) plebiscite and elections would be held within a year; (5) only participants in the insurrection guilty of offenses according to ordinary criminal law would be prosecuted.

On February 20, when Minister of Interior Rallis's authority was undermined by the appointment of a Minister of Security, a title which had become odious under the Metaxas dictatorship, Rallis resigned his portfolio, believing that the agreement to which he had been a signatory was not being fairly implemented. Plastiras averted a crisis at this point and again on March 8 by shuffling his cabinet. Plastiras was as firmly anti-Communist as anti-royalist, and his appointees were mainly old revolutionary associates who shared his views. He took a much firmer line towards the British than his predecessors or successors, and at one time said to Ambassador Leeper, "Sir, we have not been liberated from German occupation only to submit to British occupation." But the British could not be ignored. As the BBC Athens correspondent wrote on January 28, "The British army is likely to remain the single solid factor in Greek politics for some time to come."

Meanwhile Plastiras's government was being attacked by both Right and Left. The Left charged that the Rightists, whom the British suppression of the insurrection had left in control of the security forces and the administration, were dealing high-handedly with Left sympathizers. Hundreds were being beaten and arrested with no charges, and thousands were being kept in jail. Armed bands of the royalist Khi organization terrorized the Leftist sympathizers, and a secret organization called SAN (Syndesmos Axiomatikon Neon, "League of Young Officers") controlled the General Staff, placed its men in key positions, and saw to it that conscripts suspected of Leftist sympathies were kept out of the army. The Right, though dominant, objected to Plastiras's republicanism, and succeeded in forcing his resignation on April 8 by publishing a letter which he had addressed to Emmanuel Tsouderos in July, 1941, when Tsouderos was Prime Minister of the government-in-exile, in which he said that resistance to the Axis was futile.

Plastiras was succeeded by Admiral Peter Voul-

garis, whose government was, as Plastiras's had been, "service" rather than "political." But the change amounted to a victory for the Right, for, unlike Plastiras, Voulgaris was charged by republicans with favoring the monarchists and by the Left with being a tool of the financial powers. Under Voulgaris the security situation was not improved and the financial situation deteriorated. In November, 1944, the sovereign had been fixed at 2,300 drachmas and the dollar at 149. Towards the end of March the sovereign was worth 7,300 and early in May, 14,000, while the dollar reached 900. Attempts to impose taxes or to effect economies in the budget were half-hearted; the government's chief revenue continued to be derived from the sale of UNRRA supplies. In the distribution of these supplies (which was wholly a Greek government and not an UNRRA responsibility) many abuses were alleged. To increase its revenues the government cut down on the number of indigence cards issued, so that many needy persons were deprived of distributions, and in many regions it was the policy to favor partisans of the Right and discriminate against sympathizers of the Left. Raw materials distributed to manufacturers at low cost in order to set industry in motion were hoarded by industrialists for further depreciation of the drachma.

During the Voulgaris regime also agitation for rectification of the northern borders reached a crescendo. On February 28 Regent Damaskinos had delivered a speech in which he demanded territorial compensation for Bulgaria's misdeeds, and among his audience there were heard shouts of "On to Sofia," "Sofia for fifty years!" The Right press waged a vigorous propaganda campaign for territorial accessions on the Albanian and Bulgarian borders through the spring and summer, and the radio of Moscow as well as those of Sofia, Tirana, and Belgrade responded by calling the Greek regime "Monarcho-fascist." Russia failed to send the ambassador she had earlier announced she would send. The Left press in Greece deprecated the agitation and charged that it was calculated to distract attention from internal problems, to justify the creation of a large army which should become a Rightist tool, and, above all, to foment trouble between Russia and the western Allies. The Right charged that the Left preferred their Slav sympathies to the national interests of Greece, and it became evident in the course of the year that the Right hoped for and expected as inevitable a war between Russia and the western Allies. With the announcement of the atom bomb these hopes were quickened; it was thought that the Slav peril could now be ended speedily and inexpensively, once and for all. The Right was indignant when John Sofianopoulos, who had been held over as Foreign Minister from the Plastiras Cabinet because he was already en route to San Francisco when Voulgaris came into power, voted in the United Nations conference in that city with Russia and against Argentina. When he returned to Greece towards the end of June Sofianopoulos resigned his ministry and made a public statement to the effect that conversations with foreign statesmen in San Francisco had convinced him that Greece would not get a sympathetic hearing at the peace conferences unless she formed a "political" government in which all parties should be represented.

The victory of the Labor Party in the British elections, which was announced at about the same time, gave the Center and Left hope that a politically representative government would indeed be formed, but their hopes were disappointed. The

Voulgaris government continued in power, and proceeded to prepare for the elections which the Right was clamoring for. Their position was that no effective measures could be taken to regularize the political and economic situation until elections had been held. They clearly expected to capitalize on the reaction from the excesses of the December insurrection; and, as non-Rightist critics observed, they wished to exploit the advantages inherent in their control of the army, gendarmerie, administration, and judiciary.

Rightist control of the country had become so high-handed that all parties except the (royalist) Popular Party protested. Such conservative leaders as Sofouls, Kafandaris, Tsouderos, and Mylonas made a demarche to the Prime Minister on the White terror early in June, and at the same time the deterioration of the currency caused wide distress and provoked public outcry. The activity of the open and secret royalist organizations continued unabated and the border tensions grew more strained, but steps were taken to remedy the financial situation. Early in June Kyriakos Varvarevoss was made Vice Premier and Minister of Supply and immediately promulgated measures for regulating the chaotic economy. The drachma was stabilized at 4,000 to the gold sovereign or 500 to the dollar, and the state assumed control of production and distribution and assessed taxes on war profits. Varvarevoss' measures satisfied neither Left nor Right. The Left thought they favored the industrialists at the expense of the middle class and workers, and the Right resented the rigid controls and in fact succeeded in evading them until a new depreciation of the drachma should make the sums insignificant. The economic improvement was not sufficient to compensate for the vigorous objections which were being adduced by the Left and Center against the excesses of the royalist organizations and the demand for a "political" government, which, they insisted, could alone curb malefactors and prepare the country for a fair election.

The Voulgaris government resigned on August 9, but was again restored to power with only a few changes, chief among them being the elimination of Minister of Interior Tsatsos, Minister of Justice Soliotis, and Underminister of War Drakos, who had been responsible for maintaining order and preparing for the elections. The principal reason alleged for retaining the Voulgaris government was that Varvarevoss' economic reforms must not be interrupted, but on September 4 Varvarevoss resigned, and his successor removed the controls upon producers and prices. Scandals arose in connection with manufacturers hoarding and unfairly exploiting UNRRA raw materials, the depreciation of the drachma was accelerated, nor was improvement in other pressing problems visible. The gendarmerie continued to be dominated by the Right, and armed Rightist bands suppressed, sometimes brutally, those they suspected of favoring Left views. Known collaborationists continued in high office. The courts which tried the quiescent ministers in May and June pronounced sentences that even the Center castigated as ridiculously light. Collaborationists of the second degree, i.e. industrialists who had served the Germans, were then even more leniently dealt with. In October damning evidence was adduced against nineteen officers of the Special Security who were charged with having delivered over to the Germans for execution or with having themselves executed numerous patriots of the resistance, but only two received death sentences. When on October 29 the men of Sorkho in Crete attending the trial of five

persons accused of handing over fellow villagers to the Germans found the sentences too light, they promptly lynched the culprits.

The one cry of the Right was for early elections, which they maintained would at once regularize all political and economic problems, and the Voulgaris government acceded by fixing the election date for January 20, 1946. The compilation of the new election rolls was completed early in October. The Left had previously declared it would abstain from the elections, on the grounds that the election lists were being fraudulently compiled. Now a storm arose from the Center also. George Kafandaris declared that under prevailing conditions one-third of the electorate would be excluded from the polls, one-third intimidated, and the ballots of the remaining third falsified. Themistokles Sofoulis, venerable leader of the Liberal Party, declared that his and associated parties would abstain, and so, on October 9, the Voulgaris government was forced to resign.

The government crisis which was thus precipitated lasted until November 2, when a makeshift cabinet was contrived. The Regent first gave the mandate for forming a new government to Sofoulis, with the stipulation that collaboration of the (royalist) Popular Party must be secured. The Left agreed to accept whatever government Sofoulis might form, even if they themselves were not represented in it. But the Right insisted on exploiting the advantages of its position to the full, and declined to participate in any government unless January 20 were retained as the date for the elections; the elections, moreover, must be conducted on the simple majority (instead of proportional representation) system. Sofoulis and other leaders who attempted the task failed to form a government, and on October 17 the Regent himself assumed the premiership, retaining the ministers of the Voulgaris cabinet. The anomaly of the Archbishop serving also as Regent and as Prime Minister continued for two weeks, until on November 2 Panagiotis Kanellopoulos was named Prime Minister and succeeded in forming a government.

During the crisis the British had refrained from exerting direct influence on internal Greek governmental matters, although Ambassador Leeper was in constant touch with the Regent and with the party leaders who successively sought to form a government. But when the weak Kanellopoulos government emerged it came to be realized, through reports of members of Parliament who visited Greece and from press correspondents, that the hands-off policy actually amounted to support of the Right, and Under-Secretary for Foreign Affairs Hector McNeil was despatched to Athens to survey the situation and guide developments. Meanwhile want of confidence in the Kanellopoulos government and in the economic program which it announced accelerated the fall of the drachma, which by November 19 reached 72,000 to the sovereign. Only assurances that the drachma would be supported from abroad and that a firm hand would be applied to the country's finances could halt the decline, and a dinner speech of Mr. McNeil was construed to mean that the British would do neither. On November 20 the Kanellopoulos government resigned.

The new government which was thereupon formed, under dramatic circumstances, by British advice, constitutes the most significant political development of the year for Greece. The Regent informed a special council of ex-Prime Ministers that the British agreed to supply economic as-

sistance provided (a) the plebiscite on the question of the King's return were postponed to March, 1948; (b) a government of as broad a coalition as possible were formed, which should be able to hold genuine elections in the spring of 1946; and (c) the government would accept plans suggested by British experts in their efforts to ameliorate the economic situation. Mr. Sofoulis, octogenarian leader of the centrist Liberal Party, was given an unqualified mandate to form a government, and when the (royalist) Popular Party representatives refused to accept the conditions laid down by the British he proceeded without them. His first and key selections were George Kafandaris, leader of the centrist Progressive Party, as First Vice-Premier and Minister without Portfolio, Emmanuel Tsouderos, former Prime Minister of the government-in-exile, as Second Vice-Premier and Minister of Coordination with authority of the various ministries dealing with economic questions, and John Sofianopoulos, who as Foreign Minister under Plastiras had earned Rightist hatred by voting with Russia against Argentina at San Francisco, as Minister of Foreign Affairs. The Regent sought to procure the appointment of George Papandreu, who sought three ministries, including the war portfolio, and of Kanellopoulos, but Papandreu, who had been talking national socialism and monarchy, was hated by the Left, and Kafandaris, Tsouderos, and Sofianopoulos declared they would withdraw if Papandreu joined the government. Meanwhile King George II in London issued a communiqué declaring that the conditions under which he had consented to create a regency having been violated, he would thenceforward feel free to act according to the interests of his people. In view of this statement and having failed to influence the composition of the government as he desired, the Regent submitted his resignation.

The vacuum thus created lent color to the Rightist position that the Sofoulis government had no legitimacy and amounted to usurpation. Leftist elements were content with this development, and planned the legislation which, according to the constitution, enables the government to assume the headship of the state when the King and Heir Apparent are not available. But the British Foreign Secretary and British and American Ambassadors pleaded with the Regent to reconsider, and on November 24 he did in fact rescind the resignation. The Rightists, who had attacked the Regent for not resisting British pressure more firmly, were pleased with this step; their leader Stylianos Gonatas pointed out that now the Regent could do his patriotic duty by vetoing the measures proposed by the Sofoulis Cabinet. Moderate opinion was pleased with the new government and hopeful that it could restore the economy of the country and allay political tensions. The Left promised its support as long as the government would adhere to a truly middle course. The only vocal opposition came from the Right, who saw in the concession to the center the first step towards Communist control. A singular and ominous aspect of the change was that the only ground now common to the Right and Left was a strongly expressed impatience with British occupation, the Left feeling that British interference had caused all the troubles of the past year and would inevitably cause more trouble by reason of its continued basic hostility to the Left, and the Right feeling that England had betrayed its loyal ally for the sake of international advantages essentially hostile to Greek interests. During the short period the Sofoulis government has been in office it has done nothing

spectacular, but already the position of the drachma is somewhat improved, there is greater security for Leftist sympathizers, the election rolls are being subjected to revision, and there has been a marked decline of truculent saber-rattling in the direction of Greece's northern neighbors. On November 27 it was announced that Russia would now send an ambassador to Athens.

GREENLAND. A large island in northeast North America. It is a possession of Denmark (see below under *Government*). Area: 736,518 square miles. Population (1943): 20,163 natives and 500 Danes. The main settlements are Julianehaab, Godthaab (capital), Sukkertoppen, Kuttligssat, Godhavn, and Anngnagssalik. The natives speak an Eskimo dialect, while the Europeans speak Danish. Educational facilities include grade schools, high schools, and a training school for teachers. Practically all the inhabitants profess the Lutheran faith.

Production. Cod fishing is the mainstay of Greenland's economy. A total of 7,945 metric tons of cod was produced for salting in 1944. Agriculture is limited to sheep raising in the southernmost part of the west coast. The important minerals produced are cryolite (40,000 tons, 1944) and coal. Marble has been quarried and other minerals are known to exist. Trade during normal times is a monopoly of the Danish Government. During peacetime all exports are sent to Denmark (except for a portion of the cryolite output) and all imports are shipped from Denmark.

Foreign Trade. During World War II communications with Denmark were cut off and foreign trade was with the United States, Canada, and Portugal. Of the total imports in 1944, the United States supplied 52 percent, Canada 38 percent, and Portugal 10 percent. Imports and exports are mainly consumers' goods. There are no customs duties or other import formalities, but the commercial importation of commodities by private firms or individuals is prohibited.

Government. Normally the administration of all affairs pertaining to Greenland is centralized in the Greenland Administration section of the Ministry of State in Copenhagen. A Greenland Committee made up of 8 members of the Danish Rigsdag has charge of all questions pertaining to Greenland that are brought before that body. During the period of World War II, the administration of Greenland was subject to the agreement of Apr. 9, 1941, which was signed by the Danish Minister in Washington, D.C., and the U.S. Secretary of State. This agreement recognized the continuance of the sovereign rights of Denmark, and in order to maintain the status quo in the western hemisphere, allowed the United States the right "to construct, maintain, and operate such landing fields, seaplane facilities, and radio and meteorological installations as may be necessary." The agreement was to remain in force "until the present dangers to the American continent have passed."

CHARLES F. REID.

GUADELOUPE. A French West Indian colony consisting of two main islands—Guadeloupe proper (Basse-Terre) and Grande-Terre—and the dependent islands of Désirade, Les Saintes, Marie Galante, St. Barthélemy, and St. Martin (northern part only). Total area, 688 square miles. Population (1939 estimate), 310,000. Chief towns: Basse-Terre, capital (13,638 inhabitants), Pointe-à-Pitre (43,551). Education (1943-44): 131 schools and 25,630 pupils. Chief products: sugar, coffee, rum, cacao,

logwood, bananas, manioc. Trade (1938): imports 250,583,000 francs; exports 296,472,000 francs. Budget (1939): 83,608,979 francs (revenue and expenditure balanced). Public debt (Dec. 31, 1938), 12,110,210 francs (franc averaged \$0.0288 for 1938; \$0.0251, 1939). Roads (1940): 754 miles. Governor, M. Bertaut.

GUAM. The largest island of the Mariana group was ceded to the United States by Spain at the close of the Spanish-American War in 1899. It is situated in the mid-Pacific, 1,500 miles east of Manila, 1,300 miles south of Japan, 3,337 miles from Honolulu, and 5,053 miles from San Francisco. The island has a land area of 206 square miles, extending 30 miles north and south and 4 to 8½ miles wide.

Government. It is a United States naval station and saluting port under the jurisdiction of the Navy Department. The port is closed to foreign vessels of war and commerce except when special permission is granted by the Navy. The head of the Government is a Governor appointed by the President for a period of two years. The Governor and Commandant of the naval station is a naval officer. The executive, legislative, and judicial powers of government are all exercised by him. Although the people of Guam are not American citizens they are considered United States nationals and are ruled by a civil code established by the Governor. In an advisory capacity to the Governor is the Guam Congress which consists of a House of Council (16 members) and a House of Assembly (27 members).

Events, 1945. The island was recaptured from Japanese armed forces in July, 1944, and declared secured August 10, at the cost of 1,352 marines killed and many thousands wounded. Ten months after its recapture, it was turned into an impenetrable fortress and a staging area for the final assault against Japan. Thousands of marines, sea-bees, army engineers, and natives were employed on a 24-hour basis toward the building of harbor installations and airfields to enable B-29 bombers to take off and land after bombing the industrial centers and military installations of Japan, Iwo Jima, Okinawa, etc.

The extent of the damage suffered by the leading cities of Guam during the bombardment by our warships between June 19 and July 7, 1944, can readily be seen in the fact that all of the 1,750 homes in the capital city of Agaña, population 12,000, were destroyed and the cities of Sumay, Agat, Piti, and Asan were completely levelled. Within one year after its recapture by the Third Amphibious Corps, Guam became the most powerful of our advanced bases in the Pacific. The largest communications system in the world was established there in addition to harbor facilities for our largest battleships. Apra harbor handled more cargo than any other forward area. Fleet Admiral Chester W. Nimitz, and Lt. Gen. Barney Giles, Deputy Commander 20th Air Force, directed the ever-growing air and naval assault on Japan from Guam.

While these military preparations were going on natives were encouraged to work their farms and during one month the produce totaled 1,250,000 pounds. Two Victory ships, fully loaded with livestock, i.e. bulls, heifers, hogs, chickens, ducks, and turkeys, were dispatched to Guam to replenish depleted stocks. Eight hospitals were built in Guam to care for the casualties on Okinawa and Iwo Jima; 18 planes a day made 16-hour round-trip flights to evacuate the wounded.

Throughout the Japanese occupation (December 10, 1941) the people of Guam remained loyal to the United States and have cooperated with Navy personnel in harassing the Japs at the risk of death. In recognition of their contribution to final victory and their loyalty, Hon. Joseph R. Farrington, Delegate from Hawaii, introduced House Bill H.R. 3528 which would confer American citizenship on the natives of Guam.

The People. The population, according to the 1940 census, totaled 22,290 persons of whom 11,300 were males and 10,990 females. The native population is mainly of Chamorro stock, a mixture of the ancient Chamorro people (originally of Polynesian stock) with Spanish, Mexican, Anglo-Saxon, Japanese, and Chinese strains. On July 1, 1941, the estimated population was 23,394 which included 21,502 native-born, 812 foreign-born, and 588 members of the naval station. Agaña, the capital, had a population of 12,553 in 1941.

The native tongue of the inhabitants is Chamorro which is spoken at home, while English is used in the schools and in business. The predominant religion is Roman Catholicism. Education is offered on the elementary, which is compulsory, and high school levels. Enrollment in the public schools during 1940-41 averaged 5,084. All teachers in the public schools are Chamorros.

The Economy. Agriculture is the chief industry and the chief export products are copra and coconut oil. Corn, rice, sweet potatoes, and other vegetables are the principal food crops. In the foreign trade of Guam for the year ending June 30, 1941, imports were valued at \$999,410, and exports at \$84,278.

CHARLES F. REID.

GUATEMALA. A republic in Central America. Area: 42,042 square miles. Population: 3,450,732 (1943). Capital: Guatemala City.

Guatemala is the northernmost of the Central American republics. Volcanic highlands separate the broad Pacific coastal plain from the low tableland of the north. A hot climate prevails in the lowlands along the Gulf of Honduras on the east, while temperate climates are found in the intermont basins of the highlands.

Government. Guatemala is a centralized republic of 22 departments. A new Constitution signed Mar. 11, 1945, replaced that of 1879. The Constitution provides for a unicameral Congress. Members are elected for 4-year terms but may not serve for 2 successive terms. The two regular sessions of Congress are limited to a total of 6 months a year. The president is elected for a 6-year term and may not be reelected until after a lapse of 12 years. He is assisted by a Cabinet of 7 members. Members of the armed forces may not be elected to Congress or to the presidency. Municipal mayors and councils are chosen by direct popular vote. Dr. Juan José Arévalo Bermejo was elected President in December, 1944, and inaugurated on Mar. 15, 1945.

The People. Over half of the total population of Guatemala are Indians; the rest are chiefly mestizos and persons of European descent. The south and west are the most densely populated areas of the country. The largest cities are: Guatemala City, 162,828; Quexaltenango, 33,500; and Puerto Barrios, 15,800.

Spanish is the official language, but Indian languages are also spoken. Roman Catholicism is the predominant religion.

According to the 1940 census about one-third of the population over 7 years of age is literate. In 1940 there were 2,520 primary schools with a

total of 140,736 students; 69 intermediate schools with a total of 6,552 enrolled; and the National University in the school year 1942-43 had 594 students. The Guatemalan Government in 1945 embarked upon a 4 to 6 year educational campaign, under which every literate individual between the ages of 18 and 60 (except for individuals especially exempted) is required to teach one illiterate to read and write.

National Economy. Guatemalan economy is agricultural; about 90 percent of the population are engaged in farming. In 1940 over 60 percent of the land cultivated was planted to corn, the chief crop and staple food of the country. Beans are another important staple crop. Coffee, bananas, and chicle are important export crops. The 1944-45 coffee crop is estimated to total 1,000,000 bags of clean coffee. It is estimated that Guatemala has a potential production of 724,000 stems of bananas monthly.

There are small pastoral and manufacturing industries. Meat requirements are met by domestic production. Manufacturing consists chiefly of processing agricultural products and of making such items as textiles, leather goods, cement, soap, furniture, etc.

Foreign Trade. The chief export products are coffee, bananas, and chicle. Coffee exports during the quota year 1944-45 totaled 855,170 bags of 60 kilograms each, of which 765,388 bags, or 89.5 percent, were shipped to the U. S.; the remainder went principally to Canada and Switzerland. During 1944 Guatemala exported 4,495,078 stems of bananas, about a 60 percent increase over stems exported in 1943. A total of 3,480,295 pounds of chicle and chiquibul was extracted and shipped during 1944. Exports of honey and beeswax increased in 1944 over the preceding year. In 1942 total exports were valued at 20.4 million dollars, of which the U. S. took 92 percent. Exports to the U. S. from Jan. 1 to Oct. 1, 1945, totaled approximately \$21,500,000. Principal exports in order of value were: coffee, bananas, chicle, lumber, citronella oil, hand-woven Indian textiles, and lemon-grass oil.

In 1942 the U. S. provided 71 percent of total imports into Guatemala. Manufactured articles constitute the principal import items, with some raw materials and foodstuffs.

Events, 1945. A Constituent Assembly opened in Guatemala on Jan. 10 to draft a new constitution which would embody the principles of the October, 1944 revolution. The Constitution was published on Mar. 11. It preserved most of the main features of Guatemala's traditional frame of government, as embodied in the Constitution of 1879 with its amendments of 1887, 1897, 1927, and 1935, but it enlarged the base of citizenry upon which that government rested, and it broadened and strengthened the protection guaranteed by law to all Guatemalans. At the same time it reinforced throughout the governmental structure prohibitions and precautions designed to frustrate any future attempts at prolonging a presidency in the manner that had led Guatemala into dictatorships in former years. The keynote of the new Constitution was sounded in Article I, which repeated the old Constitution's opening statement that Guatemala is "free, sovereign, and independent," but amplified it to describe Guatemala as "a republic organized for the primary purpose of ensuring for its inhabitants the enjoyment of freedom, education, economic welfare, and social justice."

On Feb. 7 the Constituent Assembly decreed that Juan José Arévalos had been elected President.

He was sworn in on Mar. 15—the first popularly elected chief executive in 14 years—for a six-year term, at a ceremony attended by special diplomatic missions from 21 countries. In his acceptance speech, Arévalos strongly advocated the restoration of a Central American federation, pledged Guatemalan aid against tyranny, recommended that the American nations agree not to recognize undemocratic governments, promised autonomy of the judiciary and non-partisan government, and emphasized the necessity of greatly increased educational opportunities. On Mar. 18 Arévalos announced his Cabinet, which included three members of the 1944 Junta Cabinet and one member of the Junta itself: Captain Jacobo Arbenz as War Minister. A second member of the Junta was added to the Government on Mar. 22, when Guillermo Toriello was named Foreign Minister.

Starting before the inauguration of Arévalos, and continuing throughout the year, the new Government was engaged in liquidating the Ubico-Ponce dictatorship and stamping out its remnants.

On Jan. 23, the Junta had ordered a return to the Treasury of \$200,000 awarded to Ubico in 1940 by the National Assembly, and said that if he failed to repay within 30 days, assembly and cabinet members responsible for the act would have to repay the sum. A few days later, the Government demanded repayment of \$500,000 pension and salary given to Ubico. When no repayment was made, action was started early in March to confiscate Ubico's property in the country. On Apr. 13, the Government canceled titles and returned to the government domain 6,000 acres of land which had been given to Ubico. On Nov. 25, Congress approved a law expropriating the assets and equipment of an airline of which Ubico had been part owner. And on Nov. 28 the sale and transfer of two plantations to the wife of the former dictator were voided.

As early as Feb. 11, the Junta had arrested eight oppositionists, including all leaders of Adrian Recinos's Democratic Party, on charges of "conspiring against democratic institutions." Recinos himself, former Ambassador in Washington and a defeated candidate in the 1944 presidential elections, was ordered to leave the country or be arrested.

By early April, the political situation had become tense; it was said that a reactionary conspiracy was trying to unseat the Arévalos Government. There were numerous arrests and deportations, and on Apr. 9 Congress suspended the civil rights articles of the constitution for 30 days, retroactive to Apr. 4. The suspended guarantees were automatically reestablished in May. But late in that month the discovery of another conspiracy was announced. On June 8 Arévalos declared that it was necessary for him to reorganize his Cabinet to include men in whom he had personal confidence. There were more arrests in the middle of June. On June 19 the President prohibited further activities of three political parties: Democrat, Central Democrat, and Democratic National Front.

On Oct. 2 the Cabinet again suspended constitutional guarantees for 30 days (the period was later extended to 60 days); it declared that supporters of the former Ubico and Ponce dictatorships were plotting the overthrow of the Arévalos regime. Once again there were arrests and deportations, and Mexican authorities arrested a group of Guatemalan exiles living near the border who were said to be plotting against their Government.

As the year ended, the tension seemed to be eased: Constitutional guarantees were restored in

November and it was announced that many political prisoners had been released. The Government was able to turn its full attention to the rising prices and food shortages which were at least partly responsible for unrest; to measures of health improvement and labor betterment; and to a national campaign against illiteracy.

Foreign Relations. The foreign relations of Guatemala in 1945 were notable for a revival of the old dispute with the United Kingdom over ownership of Belize (British Honduras). One article of the new Constitution declared that "Belize is an integral part of the Guatemalan territory." Britain protested, and Guatemala rejected the protest as an "offense." It declared, however, that the issue would not be pressed until the war was over. Then, on Sept. 27, Guatemala notified Britain that it intended to reopen the matter, and on Oct. 11, it proclaimed that all British Honduran nationals were Guatemalan citizens. The British again protested, and on Dec. 28 Guatemala once more formally rejected the protest.

Diplomatic relations with the Franco Government of Spain were broken on Jan. 22, and on Sept. 10 the Spanish republican Government-in-exile was recognized.

Guatemala established diplomatic relations with the Soviet Union on Apr. 19.

HARRY B. MURKLAND.

GUGGENHEIM MEMORIAL FOUNDATION, The John Simon. A foundation created in 1925 by Simon Guggenheim and his wife as a memorial to a son who died at the age of 18. The original endowment was \$3,000,000 enlarged to \$7,000,000 by 1939, and further increased upon the death of Simon Guggenheim in 1941. In fulfilling its purpose to "promote the advancement and diffusion of knowledge and the appreciation of beauty" the Foundation awards Fellowships, normally \$2,500 a year, to citizens of the United States, Canada, and certain Latin American countries. Since its establishment the Foundation has granted 1,539 Fellowships with stipends totaling \$3,215,260. In the year 1945 the Foundation granted 154 Fellowships with stipends totaling \$352,125.

GYMNASTICS. Penn State College regained the national A.A.U. championship, but only after the closest type of competition from the Swiss Gymnastic Society of Union City, N. J., in the annual tournament held at Jersey City. Despite the Herculean efforts of Frank Cumiskey, who won five individual titles for the Swiss Society, the final tally found his team with 60 points and the collegians with 60%.

Cumiskey, a member of the 1936 Olympic squad, triumphed on the long horse, side horse, parallel bars, horizontal bar and took all-around honors.

Miss Clara Schroth, Philadelphia stenographer, stole the show in the women's meet, the versatile star of the Philadelphia Turners taking three titles and tying for another.

THOMAS V. HANEY.

HAITI. A West Indian republic. Area: 10,700 square miles. Population: 2,719,474 (1942). Capital: Port-au-Prince.

Over 80 percent of the surface of Haiti is mountainous. Lowlands along the northern coast are moist, while the lowlands in the west are semi-arid. An elevated basin forming the Plaine Centrale lies adjacent to the southern margin of the Cordillera Central, and between the Cordillera and the mountains of the southern peninsula is a deep depression

known as the Cul de Sac. High temperature and excessive evaporation lower the effectiveness of the rainfall. The climate in centers of population is warm, generally pleasant, and healthy.

Government. Under the Constitution of 1935 Haiti is a centralized republic of 5 departments. It has a bi-cameral National Assembly: a Senate of 21 members, and a Chamber of Deputies of 37. The President is elected for a 5-year term and is aided by a Cabinet of 5 ministers. President Elie Lescot was elected on Apr. 15, 1941.

The People. The population of Haiti is concentrated along the northern and southern coasts. About 95 percent is Negro, the remainder chiefly mulatto. The leading cities are: Port-au-Prince, 115,000; Cap-Haitien, 12,000; and Aux Cayes, 11,900.

French is the official language, but most of the people speak Creole French. The predominant religion is Roman Catholic.

It was estimated in 1944 that about 8 percent of the population over 10 years of age is literate. In 1941, 85,000 pupils received primary instruction in 835 schools; 35 intermediate schools had a total of 5,768 students, excluding normal school enrollment, and six institutions of higher education had a total of 236 students. Under a recent reorganization, higher education will be offered in private and special schools organized by the state or under state auspices, in addition to that available at the University of Haiti.

National Economy. Agriculture is the basis of Haitian economy. The most important crops are coffee, cotton, sugar, sisal, bananas, and cacao. Haiti's annual coffee crop averages 31,000,000 kilograms. In 1945 molasses production totaled 2,374,183 gallons, most of which was shipped to the U. S.; sugar production reached 50,266 short tons. In recent years there has been intensive development of the sisal industry, and production was expected to reach about 10,000 metric tons in 1945. Ginned cotton production in recent years has averaged about 2,727 metric tons.

Mineral resources of Haiti have not been developed, but are reported to be extensive. Manufacturing is confined chiefly to processing of coffee, sugar, and sisal, with some soap and tobacco products. A handicraft industry of some importance has been developed in recent years.

Foreign Trade. Haiti's total foreign trade in 1944 was valued at \$31,826,000, the highest recorded since the late 1920's. Exports in 1944 were valued at \$15,786,000. Of the total value, the U. S. took 67.3 percent; the United Kingdom 11.7; Canada 10.5; Colombia 5.4; Switzerland 1.9; Cuba 1.1. Banana exports for 1944-45 totaled 4,104,825 stems valued at \$2,506,931. The entire 1944-45 sugar export totaling 32,651 metric tons, was shipped to the United Kingdom, under the International Sugar Agreement. Exports of coffee for 1943-44 totaled 23,116,197 kilograms, valued at \$5,196,765. Exports in 1944 of sisal totaling 7,985 metric tons were valued at \$1,381,089; of cotton totaling 3,733 metric tons, at \$962,616; of cacao totaling 1,341 metric tons, at \$205,341.

Haitian imports in 1944 were valued at \$16,040,000, of which the U. S. supplied 70.8 percent; Mexico 14.8; Argentina 3.8; Curacao 2.8; India 2.4; Cuba 1.9; Canada 1.6; and the United Kingdom 1.4. Principal imports were: cotton textiles, foodstuffs, manufactured products, chemicals and pharmaceuticals, iron and steel products, and fuel and lubricating oils.

Events, 1945. On June 4 President Elie Lescot of Haiti branded reports of Haitian-Dominican ten-

sion as "insane propaganda," and declared that "there is no conflict between Haiti and any other country of the continent." But on June 16 military censorship was established throughout the republic, after the Government had uncovered "certain doings taking place outside of Haiti, the purpose of which is to hamper public order here and the good reputation of this country."

Bert Hicks, special correspondent of the New York newspaper, *PM*, revealed in San Juan, Puerto Rico, on Aug. 6 that the Haitian consul there had officially notified him he would not be allowed to enter Haiti in the future. The reason was said to be an article, published in *PM* on June 6, in which Hicks had implied that the Presidents of Haiti and the Dominican Republic had signed a secret treaty in which Haiti agreed to cede certain territory to its neighbor.

The Government announced officially on Aug. 12 that two men, said to be newspapermen, who had been sentenced on Mar. 1, had been executed for an attempt to assassinate the President. The police reported also that five other persons had been arrested on charges of distributing leaflets attacking the Government.

The Government announced on Aug. 26 that "by order of the President, censorship on all letters, cablegrams, and radiograms from abroad is abolished effective Aug. 25, also that military censorship established on all local correspondents is abolished."

But two days later it was reported that several Haitian journals had been suppressed and that nine journalists, including the editors of the suppressed papers, had been jailed and a tenth exiled.

On Oct. 28 a committee for Haitian democracy petitioned President Truman to demand the restoration of a democratic regime in Haiti.

HARRY B. MURKLAND.

HANDBALL. Seaman Joseph Platak, rated the greatest handball player of all time, returned to his home courts at the Lake Shore Club in Chicago last spring and regained the national A.A.U. four-wall softball title he had held for eight straight seasons prior to his setback in the 1944 tourney. Meeting Frank Coyle of the New York A.C., his conquerer the year before, Platak fell behind at 10-5 in the first game, but fought back to triumph by 21-19, 21-8.

Sam Atcheson and Ed Dettwiller of Memphis, Tenn., were the doubles winners in the only tournament of major importance held in 1945.

The sport continued to flourish on beaches and club courts of the New York area. George Gluckler and Harry Michitsch, both members of the Trinity Club, shared first place on the official A.A.U. ranking list for the metropolitan district.

THOMAS V. HANEY.

HAWAII, Territory of. A territory of the United States, composed mainly of the eight inhabited islands of the Hawaiian Island group, in the North Pacific Ocean and within the tropics. Honolulu, the capital, is located on Oahu Island, 2,408 miles from San Francisco. The islands that form the Territory have a combined area of 6,407 square miles.

Government. The head of the Territorial Government is Governor Ingram M. Stainback, who holds office by appointment of the President of the United States for a term of four years. The registered voters of the Territory elect quadrennially 15 Senators and biennially 30 Representatives, constituting the Legislature. This body passes appropriations and other acts within the Territorial

authority. The popular vote elects to each U.S. Congress a Delegate (Joseph R. Farrington), with a voice, but no vote, in the House of Representatives.

Events, 1945. With the influx of civilian defense workers, approximately 65,000, into the Territory, the housing shortage became acute. It was estimated by the Governor's Advisory Committee on Housing that there was a shortage of 21,275 dwelling units in Honolulu. Between 1940 and 1945 the population of Hawaii increased from 423,000 to 502,000 or about 19 percent.

Territorial Delegate, Joseph R. Farrington, introduced a bill proposing that the U.S. Congress authorize the people of Hawaii to take the necessary steps to qualify as a State of the Union. The Territorial Legislature adopted resolutions at the 23rd biennial session in support of Statehood and Congressional action. Secretary of the Interior Ickes went on record in support of Statehood for Hawaii.

The 10 P.M. curfew which had been in effect since Dec. 7, 1941, was ended on July 7 by Lt. Gen. Robert C. Richardson, Jr., Commanding General of the mid-Pacific area. The curfew prohibited anyone remaining on the streets between 10 P.M. and 5 A.M. without special permission. Shortly thereafter, Executive Order 9489 terminated the designation of Hawaii as a military area in which the military commander could exercise certain powers.

Although there have been numerous clashes between servicemen and civilians none reached riotous proportions until November 12 when 750 sailors of the Honolulu Naval Air Stations armed with clubs, knives, bars, etc. tangled with civilians in the city of Honolulu who were reported to be attacking men in uniform without provocation. An unfounded rumor that two sailors had been killed heightened the fury of the servicemen. Hawaii's Acting Attorney General Rhoda V. Lewis who conducted a thorough investigation of the riot stated that the responsibility for this incident and other clashes rested equally between servicemen and civilians.

In spite of the fact that there had been 8 previous Pearl Harbor inquiries another investigation was authorized by Congress. The new Pearl Harbor Investigating Committee consisted of 10 members of Congress, 6 Democrats and 4 Republicans. Senator Alben W. Barkley (D) was Chairman and William D. Mitchell was in charge of the legal staff. Hearings started on Nov. 15 and were to end on Jan. 3, 1946, when a final report was to be filed, according to a joint resolution of Congress. Prominent witnesses included Gen. George C. Marshall, Chief of Staff; Adm. James C. Richardson, former commander, U.S. Fleet; Maj. Gen. Shuman Miles, former head of Army Intelligence; and Lt. Gen. Leonard T. Gerow, Chief of the War Plans Division. Realizing that the hearings could not be concluded by Jan. 3 and that the nature of the questioning by members of the Committee was not always relevant to the inquiry, the entire legal staff tendered their resignations to Chairman Barkley on Dec. 14. Later the hearings were recessed for the holidays from Dec. 21 to Dec. 31. The life of the Committee was extended from Jan. 3 to Feb. 15, 1946, and all members seemed determined that no further extension would be necessary.

The People. The population of Hawaii as of Apr. 1, 1940, was 423,330, as compared with an estimated population of 465,339 on June 30, 1941. There were 387,197 citizens (139,299 Caucasians,

124,351 Japanese, 52,445 part-Hawaiians, 24,886 Chinese, 18,050 Filipinos, 8,460 Puerto Ricans, 4,628 Koreans, and 832 others), as compared with 78,142 non-citizens (35,183 Japanese, 34,010 Filipinos, 4,351 Chinese, 2,328 Caucasians, 2,253 Koreans and 170 others). Prior to the war the ratio of males to females was 2 to 1, but after Pearl Harbor the ratio increased to 150 to 1. In 1941 Honolulu had 200,158 inhabitants.

In addition to the University of Hawaii there are 196 public schools (12 high schools, 17 intermediate, 145 elementary, and 22 vocational and miscellaneous) and 121 private schools (elementary through college) on the islands.

Economy. The three leading industries are the tourist trade, sugar and pineapple. Although the tourist industry had been seriously handicapped by the war it was soon revived by the resumption of commercial air and steamship services. Hawaii had 94 modern hotels located as follows: 70 on the Island of Oahu, 8 on Hawaii, 3 on Kauai, and 13 on Maui. Exports to the United States mainland of Hawaiian products were valued at \$82,618,845 of which unrefined sugar represented \$52,277,853 and canned pineapples \$18,728,401. Imports from the United States mainland were valued at \$185,900,000. Edible animals and animal products, vegetable food products and beverages, and textile fibers and manufactures were the chief commodities imported.

CHARLES F. REID,

HAYDEN FOUNDATION, Charles. A charitable institution, established in 1937 to assist needy boys and young men to attain moral, mental, intellectual, and physical well-being through providing scholarships and aiding educational institutions; through building, assisting, or equipping clubs, gymnasias, and recreation centers; and through aiding hospitals.

The trustees are empowered to use the income or the principal of the fund in the furtherance of other charitable or educational projects as contemplated in Mr. Hayden's will. The will directs that in the disposition of the funds, preference be given to the activities of the Foundation within New York City and Boston, although it also provides that work may extend to other places in the United States.

The Founder was particularly interested in boys' clubs, therefore, the Trustees confine present activities to that work and limit grants-in-aid to organizations operating in New York and Boston. Headquarters of the Foundation are 25 Broad St., New York City.

The Trustees are: J. Willard Hayden, Edgar A. Doubleday, and Erle V. Davelar. The total capital assets are approximately \$45,000,000.

HEATING AND VENTILATING. In one respect 1945 began in the same way it ended—with fuel shortages—although the country at the close of the year was in far better shape than at the beginning. The cessation of war enabled refiners to divert petroleum to fuel oil rather than to gasoline but a shortage of fuel oil in 1946 was predicted by oil men who said that the more favorable price structure on gasoline was detrimental to a full supply of fuel oil. Beginning early in the year and steadily increasing throughout 1945, the demand for (manufactured) gas house heating reached unprecedented heights. This might be accounted for by (1) higher incomes on the part of many who prior to the war could not afford gas; (2) the fact that gas rates have been

constant, while coal and oil costs have increased, and (3) dissatisfaction with the grade and supply of oil and coal and with the servicing facilities for these fuels available during the war years. At any rate the postwar battle for the house heating market began in earnest and with gas in the most favorable position it has ever been, while coal, due to price increase, is in perhaps the least favorable position.

A plant for the manufacture of a combined anthracite and bituminous packaged coal was opened in Philadelphia May 23. The product consists of six 3-inch cubes wrapped and sealed in colored paper, so that the fuel can be handled and thrown in the boiler or furnace without soiling one's hands.

Two outstanding technical developments of the year were (1) a new oil burner head, designed by the Shell laboratories, intended to increase oil burner efficiencies and simplify servicing; and (2) the introduction of the baseboard radiator. The latter is a long low chamber resembling and replacing the conventional baseboard. It is used along one or two walls, has hot water circulated through it, and thus entirely replaces the usual radiator. Advantages include its inconspicuousness so that it does not interfere with room decoration, and a low floor-to-ceiling temperature differential.

A third development concerned radiant heating which heretofore has been almost entirely confined to pipes concealed in the floor or ceiling and carrying hot water. As the result of development work carried on over a period of years, a furnace company has announced a system of house construction employing a false ceiling. Between this and the true ceiling, warm air is circulated. The heated ceiling radiates energy which keeps the occupants warm. The company has licensed 16 manufacturers to design and install such systems. In addition to this, a large copper company made available full technical information for the design of radiant heating systems employing copper tubes. Further headway was made in the art of snow melting by use of pipes underground through which hot water or steam is circulated. One company installed such a system for its new office building sidewalks during the year; several airports are reported as studying the economies of such installations under runways.

Two organizations, John B. Pierce Foundation and Dow Chemical Co., announced progress in their attempts to develop a unit combining all the heat-power functions needed in a house. Dow has a 3,500 kitchen-bathroom unit to supply heat, refrigeration and hot water. Dow-Therm, with a boiling point of over 500°F, is the medium carrying heat energy to various heat exchangers, including an absorption type refrigerator. Pierce Foundation's unit, with the same objective, employs tetracresyl silicate with a boiling point of 817°F. Both of these units will be, presumably, self-contained packages ready for installation.

A study of heat losses through the floors of basementless buildings was completed by the National Bureau of Standards. This investigation was made because of the widespread use of basementless designs in low-cost housing. The Bureau showed that the heat loss could be decreased by insulating the edges or periphery as this is where most of the heat is lost.

Purdue University announced a full-scale experimental study of solar houses, to determine how much of the sun's heat can practically be used for heating a building. Two identical houses except

for glass (one has the customary wall-to-glass ratio, the other is two-thirds glass on the south wall) are being tested this winter to determine the relative cost for equivalent comfort in the two houses. A Canadian glass company constructed, during the summer, a solar house in Toronto with the same general objective as those of the Purdue study.

American Gas Association reported research on kitchen ventilation. The findings showed that hoods over stoves were highly desirable in carrying away moisture and in confining odors to the kitchen. TVA issued a handbook on hay drying, primarily devoted to use of ventilation to carry away moisture. Studies on hay drying continued at numerous agricultural research centers, with, in certain places, emphasis on use of supplementary heat.

CLIFFORD STROCK.

HECKSCHER FOUNDATION FOR CHILDREN. An organization founded by August Heckscher (1848-1941) to promote the welfare of children. The Foundation was incorporated March 15, 1921, and occupies a building at 346 West 89 Street, New York 24. It maintains benevolent, educational, recreational, and welfare activities. It specializes in a cultural program for children including art, singing, piano lessons, tap dancing, ballet dancing, interpretative dancing, creative dramatic arts, children's theatre production group and Heckscher Children's Symphony Orchestra composed of fifty young musicians from the ages of seven to seventeen.

Dramatic productions are given three times a year at holiday time, a program of Ballet Divertissement in June and a Concert by the Symphony Orchestra every eight weeks. All these performances are given at the Heckscher Theatre, Fifth Avenue at 104 Street and are open free to the public.

HOCKEY. Toronto, which could place no better than third in the National Hockey League race, scored one of the biggest upsets in recent years when it fought its way through the play-offs to capture the Stanley Cup, emblematic of world supremacy in the sport.

Sparked by the brilliant goal-tending of Frank McCool, a former sports writer and Canadian Army dischargee, the fast-skating Maple Leafs turned back a rugged Detroit sextet by 4 games to 3 in the cup finals.

McCool, who received the Calder Trophy as the league's outstanding rookie of the year, shut out the Red Wings, 1-0, 2-0 and 1-0, only to have Detroit come roaring back to tie the series with triumphs by 5-3, 2-0 and 1-0. Then in the thrilling seventh battle, the veteran Babe Pratt tallied on a great shot near the close to give the Leafs a 2-1 decision and the prized cup.

Toronto had served notice that it was a fighting outfit when it took the measure of the Montreal Canadiens, champions in the regular league race and defenders of the Stanley Cup, in the semi-final round. Detroit recorded a mild surprise by eliminating Boston's Bruins in the penultimate round.

Although play in general during the campaign fell far below that of the prewar era in quality, the league's attendance again swung sharply upward all around the circuit.

Individual scoring honors were captured by Elmer Lach of Montreal, who tallied 80 points on 26 goals and 54 assists. Lach also won the Hart Trophy, awarded annually to the National League player voted most valuable to his team, while Bill Durnan, also of Montreal, annexed the Vezina

Trophy for the second straight season, the prize being given to the goalie whose team is least scored against during the regular campaign.

The Seattle Ironmen, Western kings, carried off national amateur honors by conquering the Boston Olympics, Eastern League champions, 4 games to 2, while laurels in the American League went to the Cleveland Barons when they turned back the Hershey (Pa.) Bears in four out of six contests. The Jamaica Hawks triumphed in the Metropolitan League and the St. Michael's College Majors of Toronto annexed the Canadian junior crown.

THOMAS V. HANEY.

HONDURAS. A Central American republic. Area: 59,161 square miles. Population: 1,201,310 (1945). Capital: Tegucigalpa.

The land surface of Honduras is largely mountainous, except for the southern coastal lowland and a few deep river valleys in the north. Most of the settled areas in the highlands range from 3,000 to 4,500 feet in elevation. The northern half of the country is wet and tropical; the south and southwest have tropical dry-winter climate.

Government. The Constitution of 1936 provides for a centralized republic of 17 departments and 1 territory, and a unicameral National Congress of 45 members. The Congress meets in regular session on Dec. 5 each year for 60 to 100 days. The President and members of Congress are directly elected for 6-year terms, and the President may not succeed himself in office. He is aided by a Cabinet of 6 ministers. General Tiburcio Carias Andino became President in 1933 for a 4-year term which was extended to Jan. 1, 1943, and later to Jan. 1, 1949, by constitutional amendment.

The People. About 86 percent of the total population of Honduras are mestizos; the rest are divided among Indians (9 percent), Negroes (2.2 percent), and persons of European descent (1.8 percent). The Indians live in the highlands; the negroes on the north coast. Highest population density is in the southwest. The largest cities are Tegucigalpa, 47,200; San Pedro Sula, 20,400; and La Ceiba, 11,300.

Spanish is the official language, Roman Catholicism the prevailing religion.

It is estimated that 52.2 percent of the persons over 7 years of age are illiterate. In 1942 there were 55,567 students in 1,083 primary schools; 2,544 students enrolled in 18 intermediate schools; and 378 students in the Central University.

National Economy. Honduras has an agricultural economy. The chief export crops are bananas and coffee. Other export crops are: tobacco, citrus fruits, coconuts and copra, citronella, and loofa sponges. Production of abacá was begun in 1944. Domestic food crops include: corn, beans, and rice. Cattle-raising supplies meat for the domestic market and the most important export to countries other than the U. S. Honduras also exports forest products, chiefly mahogany, pine, crude rubber, liquidambar and turpentine. Gold and silver are the most valuable mineral exports.

Small manufacturing establishments supply the domestic market with such articles as cotton goods, yarns, cigarettes, matches, soap, and candles.

Foreign Trade. Honduran exports and imports attained almost prewar levels in 1943-44, merchandise trade being valued at \$21,690,477. The total value of exports was \$9,462,532, of which bananas and precious metals accounted for 71 percent. More than 85 percent of total exports for 1943-44, valued at \$8,081,003, were shipped to the U. S. During 1944, banana exports totaled 10,359,159 stems, an

increase of 69 percent over 1943; shipments of dried and powdered bananas totaled 444,286 pounds; coffee exports to the United States amounted to 5,239,047 pounds, and to other countries (Mexico and British Honduras) 813,058 pounds. Other significant export items for 1944 were: gold bullion valued at \$791,429; 32,556 pounds of citronella oil; 63,089 pounds of loofa sponges; 13,641,001 coconuts.

The value of merchandise imports during the fiscal year 1943-44 totaled \$12,227,944, the highest since 1929-30, but the volume in kilograms was about 25 percent below the average for the last five prewar years. The U. S. supplied imports valued at \$7,776,972, or about 64 percent of the total; El Salvador provided about 13 percent, and Mexico 10 percent. In 1941-42 manufactured goods amounted to 72 percent of total imports, raw materials 16 percent, and foodstuffs and beverages 11 percent.

Events, 1945. Honduran relations with Guatemala and El Salvador were strained, as Honduran exiles used those countries as bases for propaganda and action against the Administration of President Tiburcio Carias Andino. Julián R. Cáceres, Ambassador in the U. S., denied on Jan. 9, however, that Guatemalan military men were in Honduras plotting against their own Government, and he asserted that Honduras wanted to "live in peace and harmony with its neighboring countries." On Jan. 28 Carias declared that he held no rancor against neighboring countries from whose territories armed forces had attacked him in 1944, and many students and soldiers who had fled after the unsuccessful rebellion were said to be returning.

Then, on Apr. 15 a well-armed band of some 300 exiles invaded the northern Honduran state of Copán from Guatemala and attacked local garrisons. They scored initial successes and the fighting went on for some time. But eventually government forces routed the invaders and killed most of them.

By the middle of June, oppositionists were returning to Honduras from Guatemala and El Salvador, in response to the President's promise not to take action against them. Several prisoners charged with "activities against peace and order" were released early in November. The wartime state of siege and suspension of constitutional guarantees were terminated on Dec. 18, and all political and military prisoners were said to have been freed by Dec. 25. The situation in Honduras continued unsettled but it appeared that Carias had strengthened his position because of lack of unity among his opponents.

The National Congress adjourned on Mar. 13, after having approved a series of wartime measures, including: exclusion of Italian funds from "freezing" orders; regulations for obligatory transfer of Axis assets to Honduran nationals; appropriation of funds to fulfill international obligations; and approval of three contracts for local air transport.

HARRY B. MURKLAND.

HOSPITALIZATION, Federal Board of. An advisory Board of the U. S. Government, organized in 1921 to coordinate the hospitalization activities of the medical branches of the Army and Navy, the U. S. Public Health Service, the U. S. Veterans' Administration, St. Elizabeth's Hospital, and the Commissioner of Indian Affairs. On May 7, 1943, it was also designated as an advisory agency to the Bureau of the Budget. It has been charged with the development of a complete over-all program for providing hospitalization for the veterans of World War II. Chairman in 1945: Gen. Omar N. Bradley.

HOWLAND ISLAND. A mid-Pacific island (0° 49' N. and 176° 40' W.), belonging to the United States. It lies athwart the main steamship lanes and the Pan American Airways route from Honolulu to New Zealand and Australia. An aerological station was established during 1936 by the U.S. Dept. of the Interior.

HUMAN NUTRITION AND HOME ECONOMICS, Bureau of. A Bureau of the U.S. Department of Agriculture, established as the Office of Home Economics in 1923. To meet the demand of American families for scientific facts to aid them in the best use of their resources, the Bureau conducts research on food, fiber, and other products of agriculture contributing to everyday living, and on economic problems that affect rural family living. Chief: Hazel K. Stiebeling.

HUNGARY. A state in central Europe. Area: 35,875 square miles (1938 estimate). Population: 9,106,252 (1938 estimate). Chief cities (with Nov. 9, 1939, population figures): Budapest (the capital) 1,115,877, Szeged 131,893, Debrecen 122,517, Kolozsvár 100,844, Kecskemét 83,732, Nagyvárad 82,687, Miskolc 73,503, Ujpest 72,940.

Education and Religion. See YEAR BOOK for 1944.

Production, Foreign Trade, etc. For Hungary's economic situation before and during World War II see YEAR BOOK for 1944, *Statistical Year-Book of the League of Nations*, 1942/44, and *Foreign Commerce Weekly*, Mar. 17 and 31, 1945 (U.S. Dept. of Commerce, Washington, D.C.).

Finance. Budget estimates (1944, including estimates of revenue and expenditure for annexed territories which were evacuated by Hungary on Jan. 20, 1945): revenue 5,866,700,000 pengő; expenditure 6,147,100,000 pengő. The public debt increased from 1,937,400,000 pengő on June 30, 1939, to 6,501,000,000 pengő on Dec. 31, 1943. For the year 1944 the service of the public debt required 363,800,000 pengő. It was reported in the press that notes in circulation totaled 106,000,000,000 pengő on Oct. 30, 1945.

Events, 1945. The early weeks of 1945 brought to Hungary the cruel consummation of the tragedy implicit in the acts of the Horthy Regency. By aiding the Reich to despoil Czechoslovakia after Munich, signing the Anti-Comintern Pact (Feb. 24, 1939), joining the Fascist Triplice (Nov. 20, 1940), participating in the Nazi invasion of Yugoslavia (Apr. 6, 1941) and following Hitler in waging war on the U.S.S.R. (June 27, 1941) and the United States (Dec. 13, 1941), the Magyar feudal elite condemned itself to destruction and its country to disaster.

The year opened with Soviet armies besieging Budapest, while the Provisional Government of Col. Gen. Bela Miklos de Dalnok at Debrecen declared war on Germany (Dec. 30, 1944) and asked the Allies for an armistice (see YEAR BOOK for 1944, pp. 279-81). It was revealed early in January that Horthy's confidential agents had signed a secret armistice on a motor boat in the Bosphorus on Sept. 9, 1943, with Sir Hughe Knatchbull-Hugessen, British Ambassador to Turkey. This early effort to get out of the war, like its later counterparts, had failed for military reasons. Only with the Wehrmacht smashed and most of the kingless kingdom occupied by the Red Army did peace become possible.

On January 20 an armistice was signed in Moscow by Marshal Klementy Voroshilov for the U.S.S.R., the United States, and Great Britain on the one side and by Foreign Minister Janos Gyoen-

gyoessy, Defense Minister Col. Gen. Janos Voeroes, and Istvan Balogh for the Hungarian Provisional Government (text in *New York Times*, Jan. 22, 1945). Its terms amounted to "unconditional surrender." Hungary placed its armed forces at the disposal of the Allies, accepted its 1937 boundaries and agreed to pay \$300,000,000 in reparations in kind over a six-year period, with the Soviet Union to receive two thirds of the total. Of the balance, \$70,000,000 was to go to Yugoslavia and \$30,000,000 to Czechoslovakia under subsequent agreements.

The agony of Budapest ended on February 13 after fifty days of siege operations and street battles. The Wehrmacht and its Magyar Fascist allies lost 160,000 in killed and captured. The handsome capital, which the Nazi High Command had vainly sought to turn into "another Stalingrad," suffered grievous devastation, though it was not quite the "heap of rubble" of which German propagandists boasted. With the rapid expulsion of the broken enemy from the northwestern provinces, a bleeding Hungary sought to bind up its wounds and begin a new life.

Sic Transit Gloria. Late in April the aged Nicholas Horthy was captured in Bavaria, Germany, by the American Seventh Army. On May 4 he disclosed a letter which he had written to President Truman asking that he be "listened to" at the peace conference, blaming the Treaty of Trianon and the Nazi Reich for all of Hungary's woes, and repeating the hoary fiction that "we had no aspirations outside our own borders but sought only to keep Bolshevism out of our country." Other relics of the past fell into American hands, including fifty carloads of jewelry, rare furniture and rugs shipped to Germany to escape the Red Army, the Hungarian crown jewels, and \$800,000,000 in bullion of the Hungarian National Treasury.

Horthy was released from protective custody at the end of the year. Whether he would later be indicted and tried as a war criminal was uncertain. Pro-Nazi and anti-Semitic Bela Imredy, who had resigned the premiership on Feb. 15, 1939, on discovering that he had "Jewish blood" and had later sanctioned the slaughter of several hundred thousand Jews as a member of the Sztotjay Cabinet, was turned over to the Hungarian government by American authorities. On November 23 he was sentenced to be hanged for treason, as was Laszlo de Bardossy. The latter was hanged, Jan. 10, 1946, in Budapest.

Of greater import than the fate of individuals was the fact that Hungary's thousand-year-old landed aristocracy was swept into oblivion in the aftermath of the catastrophe. In bringing their nation to ruin, the magnates who had perpetuated feudalism on the Danube through many vicissitudes encompassed their own ruin as a ruling class. With Soviet encouragement, the Provisional Government lost no time in confiscating the great estates and partitioning them among the peasants. This program, always urged by the Social Democrats and Communists, was no less dear to the more conservative Small Landowners Party of Zoltan Tildy and Foreign Minister Gyoengyoessy, many of whose leaders had long suffered persecution at the hands of the nobles. Whatever social changes the future might bring, Hungary's ancient gentry was lost beyond hope of restoration. By mid-summer some 14,000,000 acres had been distributed among 700,000 farm workers, with confiscation the rule for fascist landowners and war criminals and partial compensation for the rest.

East vs. West. Throughout the year Hungary re-

mained under Soviet occupation and became a bone of contention, albeit ultimately a source of concord, between the U.S.S.R. and the Atlantic Powers. Voroshilov became chairman of the Allied Control Commission in Budapest. In Hungary, as elsewhere, the conduct of Soviet troops was not calculated to enhance the popularity of the Soviet Union and its local sympathizers, although disciplinary measures were sufficiently tightened by midsummer to put an end to the worst abuses. The role of the Red Army, however, served to discredit the Communist Party which shared power in the Mtklos coalition with the Social Democrats, the Peasants and the Small Landowners.

Friction over Hungary among the Super-Powers centered on preparations for a general election and on Magyar-Soviet economic relations. When the parties of the coalition, under Soviet pressure, agreed to present a joint list of candidates, Bevin and Byrnes indicated that they regarded such an arrangement as wholly "undemocratic" and that their governments would not recognize any regime resulting from such an election. On August 29 the balloting scheduled for September was postponed. Further frictions were engendered at the London Conference of Foreign Ministers. Repeated allegations were made in Great Britain and the United States that Moscow was imposing a "new totalitarianism" in Hungary. No such intention, however, was visible in the conduct of Marshal Voroshilov and in the policies of the Kremlin. On September 29 the U.S. State Department announced its readiness to recognize the Hungarian Government, following receipt of a note of September 25 (in reply to an inquiry of September 22, delivered by H. F. Arthur Schoenfeld, U.S. representative in Budapest), guaranteeing freedom of political expression to democratic groups, rights of assembly and untrammelled elections.

Anglo-American recognition hung fire however for another month. On October 7 municipal elections in Budapest resulted in a striking victory for the Small Landowners. An agreement of mid-October for a joint election list between the Small Landowners and the Communists provoked further resentment in London and Washington and was attributed in some quarters to Voroshilov's influence. On October 23, however, it was announced that the four major parties would submit separate lists, but would continue a coalition regime regardless of the election results. On November 2, two days before the voting, the U.S. State Department extended recognition by accepting Kladar de Szegedy-Maszak as Hungarian Minister.

Soviet-Magyar Trade Parleys. Meanwhile London and Washington took vigorous exception to a five-year trade agreement initialed in late summer by Budapest and Moscow. It provided for the establishment of a Hungarian-Russian Trading Company to develop Magyar enterprises in iron and steel, oil, aluminum, coal, power, chemicals, machinery, shipping and transport, with each government supplying half of the capital. The pact was signed in October, subject to approval by the Allied Control Commission and ratification by the signatory states. While the text was not published, it was alleged by Western critics to pave the way for Soviet control of Hungarian economy. On October 13 the U.S. State Department, seconded by the British Foreign Office, made representations to Moscow against the pact on the ground that its bilateral character was a departure from the Yalta accord for joint action by all three Powers in liberated and occupied territory.

Elections: The Tildy Cabinet. On November 4 Hun-

gary's voters chose a new parliament. The campaign was embittered by the controversies among Washington, London, and Moscow and by the action of Primate Joseph Cardinal Mindszenty on election eve in distributing a pastoral letter characterizing the agrarian program as "an act of vengeance against the landowners." There was no Soviet pressure. The election was in fact the freest which Hungary had enjoyed in many decades. The Small Landholders won 59 percent of the popular vote and 191 seats, the Communists 17 percent and 54 seats, and the Social Democrats 18 percent and 52 seats.

Baron Zoltan Tildy, a Calvinist clergyman and successor to Tibor Eckhardt as leader of the victorious party, denied that Voroshilov had urged either a united list or a postponement of the elections. The new Cabinet was constituted as follows: Premier—Zoltan Tildy, Small Landholders; Foreign Minister—Janos Gyoengyoessy, Small Landholders; War—Eugen Tombor, Small Landholders; Finance—Ernest Gero, Communist; Justice—Dr. Stefan Reisz, Social Democrat; Commerce—Alexander Ronai, Social Democrat; Industry—Antal Ban, Social Democrat; Education—Desider Kereszthury, Peasant Party; Food—Karoly Baranyes, Small Landholders; Reconstruction—Antal Jozseg, Small Landholders; Communications—Imre Nagy, Communist; Welfare—Erik Molnar, Communist.

Toward a Peace Treaty. Premier Tildy indicated that his government would ask a moratorium on reparations payments on the ground that currency inflation and general impoverishment made fulfillment of the armistice terms impossible. On the day after the election the United States informed Budapest that it regarded the proposed Soviet-Hungarian trade agreement as incompatible with the most-favored-nation clause in the American-Hungarian commercial treaty of 1925. The issue, declared Tildy, "is no longer a matter for Hungary to decide." The Hungarian-Russian Trading Company was dissolved in December. But the broad problems of importing foreign capital and restoring foreign trade, both of which depended upon Moscow in the absence of any Anglo-American program of Hungarian reconstruction, were still unsolved at the close of the year.

These and other questions vital to the Hungarian future hinged upon the conclusion of a peace treaty. The procedural deadlock at London in September delayed action, but the Moscow Conference of December 16-26 resulted in agreement that the Powers signatory to the armistice should draw up a peace treaty, to be submitted for discussion to a gathering of 21 states not later than May 1, 1946, and to be put in final form by the Big Three. Hungary's fate, like that of Italy, Rumania and Bulgaria, thus depended more than ever on concord or discord among the Super Powers. If Soviet concessions to the Western view of democracy should be matched by Western recognition that Hungary must inevitably remain within the strategic and economic orbit of the U.S.S.R., it seems probable that a peace treaty will be signed in 1946 and that Hungary will be enabled to take the road toward economic recovery in a social context which for the first time offers promise of some tangible measure of freedom and self-fulfillment for the mass of the Magyar people.

See CZECHOSLOVAKIA, GERMANY, RUMANIA, UNION OF SOVIET SOCIALIST REPUBLICS.

FREDERICK L. SCHUMAN.

ICELAND. An island republic in the North Atlantic, situated 200 miles east of Greenland and about

540 miles northwest of Scotland; occupied by Anglo-American forces since May 10, 1940, for the duration of the war. Area, 39,709 square miles only one-fourth of which is habitable. Population in 1941, 121,618 (excluding Anglo-American forces). Populations of the chief towns: Reykjavik (capital), 70,902 inhabitants in 1942; Akureyri, 5,644; Hafnarfjörður, 3,783.

Government. The Constitution of May 18, 1920, (amended in 1934 and 1941) provided for a constitutional monarchy. The King of Denmark exercised executive power through a responsible Cabinet. Legislative power rested conjointly with the King and the Althing, the oldest parliament in the world, established 930 A.D. The Althing consists of 52 elected members. One third of its members are elected to the upper chamber by the whole Althing; the other two-thirds form the lower chamber.

On Apr. 10, 1940, the Althing authorized the Government temporarily to exercise the sovereign powers vested in King Christian X and to assume full charge of Iceland's foreign affairs, previously conducted by Denmark under the Act of Union. The Althing on May 16, 1941, adopted various constitutional amendments with a view to establishing an independent republic upon expiration of the Act of Union in 1943. Sveinn Björnsson, former Icelandic Minister to Denmark, was elected Regent on June 17, 1941. After the proclamation of the republic on June 17, 1944, Björnsson became President. Chosen by the Althing for a one-year term, he was continued in office in 1945; see EVENTS below.

Events, 1945. In contrast with 1944, when Iceland achieved full national independence and elected its first President, the past year was uneventful for the little island republic.

Even in the final phase of the war Iceland suffered a shipping disaster: in mid-February, the S.S. Dettifoss, last passenger ship plying between Iceland and the United States, was torpedoed and sunk with the loss of 15 lives.

Considerable disappointment was felt in political circles at the Allies' failure to invite Iceland to the San Francisco Conference. Such an invitation would probably have been extended had Iceland declared war on Germany before March 1. But quite apart from the fact that Iceland in 1918 announced itself perennially neutral and embodied this declaration in its Constitution, the predominant feeling was that it would be ridiculous for a country without any armed forces whatsoever to declare war on anybody.

The first popular election for the presidency, scheduled for May, was called off when no opposition developed in the Althing against continuing the incumbent, Sveinn Björnsson, in office. On March 28, the assembly agreed by acclamation to reelect the first President, whose initial term was due to expire in June 1945, for the regular four-year period ending in 1949.

The question of American bases in Iceland continued to agitate public opinion throughout the year. On June 3, Brig. Gen. Martinus Stenseth, U.S. commander on the island, declared in Stockholm that after four or five months Iceland no longer would be needed as a military base. He forecast the withdrawal at that time of all American forces except for the staff of the principal airfield near Reykjavik, which is an intermediary landing place on the United States-Sweden air transport route.

In October, however, reports gained wide circulation that the United States was negotiating with the Reykjavik Government for a 99-year lease

of the military and naval bases established on the island. Apparently in connection with this development, Representative Bertrand W. Gearhart of California on Oct. 29 introduced a resolution in the House, in Washington, to invite Iceland into the United States as the 49th state. The suggestion was as coolly received in Iceland as in the U.S.

Production. Fishing is the chief industry; it supports nearly 30 per cent of the population directly and in 1942 it provided 96 percent of the value of all exports. About 36 per cent of the inhabitants live by agriculture, sheep raising, and dairy farming. Potatoes, turnips, and hay are the chief crops. There are very few trees and only low grade coal deposits, but extensive peat deposits are used for fuel and many buildings in Reykjavik are heated by water from hot springs.

Foreign Trade. Imports in 1944 averaged 20,610,000 crowns a month, while exports were valued at 21,190,000 crowns monthly. Great Britain and the U.S. were the chief trading countries during the war.

JOACHIM JOESTEN.

ILLUMINATION. In spite of wartime limitations, significant progress was made in illuminating engineering and allied activities. Many were military developments, some of which now may be talked about. In the more ordinary applications of light, never before have there been such high levels of illumination as during the war years. The practical value of high illumination levels in getting out the quantity and quality of war goods demanded of American industry was demonstrated beyond doubt. Outstanding contrast was the development of an understanding and technique of low-level illumination such as was required for blackout conditions.

The number of large lamps sold reached an annual total of 850 million units in 1944, or 180 percent of the 1938 total. Fluorescent lamp consumption progressively doubled itself during the war years, reaching a high of 35 million units in 1945. The total sales of all types of lighting equipment rose to a peak of more than \$250,000,000 in 1942, and electric power consumption for illumination rose above the level of 60 billion kw-hr annually during the war years, 200 percent of the 1938 level.

Military use of light and lighting equipment ranged from the 600-million candlepower searchlights to high-level fluorescent lighting in battleship control rooms, and down to the scarcely measurable light radiated by phosphorous tape and radioactivated fluorescent instrument dials and marker buttons used in combat under blackout conditions. Military construction projects were floodlighted by means of portable equipment. Temporary and emergency landing strips were floodlighted and outlined by air-borne lighting kits. An especially rugged "high-impact" filament lamp was designed for the Navy. This lamp has a special crystal structure in the tungsten wire to give it mechanical strength either hot or cold. The filament is coiled on a small mandrel with high pitch to resist distortion while burning; multiple supports for the filament were used with a 90 degree bend at each loop to prevent "interlock." A special cushioning base with either a copper-wire mesh or rubber sleeve provided strength sufficient to resist every shock except a direct hit.

Much of the superior marksmanship of aerial gunners was due to the optical gunsight. This utilized a special gunsight lamp about the size of a walnut which comprised a complete optical pro-

jector within a frosted and silvered bulb. Special forms of filament in this lamp were mounted accurately within the bulb to project uniform and intense light on the reticle of the gunsight, creating the sight range used for aiming. The sea-rescue lamp is similar in principle, and with no other optical accessories throws a beam visible at night for 60 nautical miles in clear weather. A lighting kit containing complete equipment for lighting an emergency airport, and readily portable by air, was developed in 1944. Little 10- and 25-watt 120-volt lamps were used for outline lighting in small prismatic hoods. The floodlight lamp is a special 1250-watt 120-volt biplane filament lamp suitable for use in a Fresnel lens optical system. The flashing beacon lamp is a 99-watt 110-volt lamp with special filament. Thousands of these kits were made and used, chiefly in the Pacific area. Tons of fluorescent and phosphorescent materials were used for aircraft and marine instrument dials, military maps, luminescent guide tape, signal flags, sea rescue kits, and many other uses. During the last days of the Belgian Bulge, 10,000 pounds of brilliant fluorescent identification panels were flown daily to Europe to be used by U.S. ground forces to identify themselves to friendly aircraft. This was necessary because so much American equipment had been captured by the Germans that Allied fliers could not tell friend from foe.

Photographic lighting and the use of light and ultraviolet radiation in photochemical reactions ranked high in military importance. It can be reported that on every front round-the-clock reconnaissance photographic runs were made by airmen, the night pictures being lighted from high-flying airplanes by new and enormously high-powered flash electric lamps. In photochemistry, some of the more important wartime products were created by the use of the catalytic action of light, chiefly the near-ultraviolet. An example is the gas hexachlorethane used for smoke screen. The gas was used in large quantities in Europe and was made entirely by photochemical processes employing mercury-vapor lamps.

Developments of commercial lighting included some new sources. "Slimline" fluorescent lights were created to provide longer thinner lamps for showcase lighting and other installations where space is limited or where long ribbons of light are desired. Development of a 32-watt 12-inch "circine" lamp was demonstrated in November, for use in portable fixtures or for decorative purposes. Miniature fluorescent lamps were developed for decorative purposes including Christmas-tree lighting. A 375-watt infrared lamp was developed for industrial heating service. A new color for fluorescent lamps, known as 4500-degree white, was announced for 40-watt and 100-watt sizes. This provides a color between the 3500-degree standard white and the 6500-degree, called daylight. Special fluorescent lamps were developed for direct-current service. A new 400-watt mercury vapor lamp was developed for street lighting service, and some experimental installations made. Experimental installations also were made of fluorescent lights for street lighting purposes. A new photo-flash bulb was developed for use with daylight color film, to provide better color balance and 40 percent more light output, as the result of the use of an improved blue dye in the lacquer coating of the lamp. A 1-watt fluorescent glow lamp was announced for night-light and safety-light service chiefly in the home. New fluorescent lamps with a new phosphor and special glass provide erythral

radiation for sun-lamp service; to be available in 20-watt and 40-watt sizes. Corresponding improvements were reported in accessories and related fixtures. Experiments are continuing in the use of ultraviolet radiation for the reduction of air-borne bacteria in stores, schoolrooms, homes, and other places where public health is affected.

G. ROSS HENNINGER.

IMMIGRATION, EMIGRATION, AND NATURALIZATION. The immigration and nationality laws are administered by the Immigration and Naturalization Service of the United States Department of Justice.

Immigration and Emigration. During the fiscal year which ended June 30, 1945, 38,119 immigrant aliens were admitted to the United States for permanent residence. This represents a 34 percent increase over the 28,551 immigrants admitted in the previous year, and is the largest number admitted in any year since the United States entered World War II. However, it is a marked decrease from the admissions of prewar years which aggregated 51,776 in 1941, 70,756 in 1940, and 82,998 in 1939. The permissible quota for the year was 153,879 but just 7.5 percent of the quota was filled by the 11,623 quota immigrants admitted. The quota of 105 persons of the Chinese race, authorized by the Act of December 17, 1943, was the only quota completely filled. However, a number of countries with small quotas, Greece, Portugal, and Spain, completed at least 85 percent of their quotas. Of the 26,496 non-quota immigrants 22,770 were natives of non-quota countries, chiefly Canada and Mexico. Other non-quota immigrants were 3,078 relatives of citizens, 230 ministers, professors, and their wives and children, and 360 in all other classes. The number of immigrant aliens admitted, showing the countries in which they last resided, and the number of resident aliens departing for future permanent residence abroad, are shown in the accompanying table.

Aliens admitted for temporary stay, and resident aliens returning from a brief sojourn abroad, totaled 164,247. This number comprised 18,054 government officials, their employees and families; 107,729 visitors for business or pleasure, 28,174 aliens in transit through the United States, 6,896 returning resident aliens, 2,866 students, and 528 in other classes. The relaxation of travel restrictions by the governments of Canada and the United States accounts in a large measure for the increase of 42 percent from the number of non-immigrants admitted last year.

Aliens seeking admission to the United States who do not meet the requirements for entry are excluded at the ports of entry. During the past year 2,341 aliens seeking admission for 30 days or longer and 1,901 aliens at the land borders who wished to come in for less than 30 days were excluded. Of those who sought admission to remain for more than 30 days, 70.4 percent were excluded at the Canadian border, 14.5 percent at the Mexican border, and the remainder at the seaports. The Act of September 27, 1944, amended Sec. 3 of the Act of February 5, 1917, so as to exclude "persons who have departed from the jurisdiction of the United States for the purpose of evading or avoiding training or service in the armed forces of the United States during time of war or during a period declared by the President to be a national emergency." Under this new provision, 6 persons were debarred from entering the United States who sought to enter for 30 days or more, and 9 were excluded who sought admission for less than 30 days.

IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED, FISCAL YEARS 1944 AND 1945, BY COUNTRIES OF LAST OR INTENDED FUTURE PERMANENT RESIDENCE

Countries	Immigrant		Emigrant	
	1944	1945	1944	1945
All countries	28,551	38,119	5,669	7,442
Europe	4,509	5,943	2,666	3,997
Albania	1	1	..	..
Belgium	126	71	1	20
Bulgaria	6	3	..	..
Czechoslovakia	136	64	..	3
Denmark	61	43	..	1
Estonia	26	16	..	..
Finland	29	29	13	8
France	387	201	11	242
Germany	238	172	2	2
Great Britain (England, Scotland, Wales)	1,210	2,784	2,199	2,709
Greece	96	192	116	296
Hungary	15	53	8	17
Ireland (Eire)	226	176	..	3
Italy	87	54	..	..
Latvia	68	125	11	38
Lithuania	120	213	1	8
Netherlands	24	16	..	..
Northern Ireland	37	19	..	..
Norway	71	50	9	13
Poland	44	302	7	22
Portugal	127	61	9	17
Rumania	292	195	1	..
Spain	431	570	148	191
Sweden	70	77	..	..
Switzerland	271	156	29	78
USSR	58	45	35	79
Yugoslavia	33	39	2	32
Other Europe	41	18	19	73
Asia	93	88	5	6
China	85	110	40	130
Japan	227	442	95	329
Palestine	50	71	44	176
Syria	4	1	..	..
Other Asia	45	133	10	43
Canada	8	18	4	3
Newfoundland	120	219	37	107
Mexico	9,821	11,079	451	567
West Indies	322	451	9	38
Central America	6,598	6,702	1,732	1,170
South America	3,198	5,452	58	123
Africa	1,985	3,423	238	246
Australia	1,160	1,609	190	346
New Zealand	112	406	76	124
Other countries	461	1,261	121	138
	116	364	12	23
	42	987	15	341

The greatest volume of travel into and out of the United States from foreign territory occurs at the Canadian and Mexican borders where aliens and citizens frequently make daily or weekly crossings and re-crossings. During the fiscal year 1945 there were 55,801,140 such entries of which 27,395,495 were by aliens and 28,405,645 were by citizens.

Passengers arriving by air at land and seaports totalled 304,331, and continued an upward trend represented by an increase from 251,237 in 1944 and 162,019 in 1943. Immigrant Inspectors boarded 76,946 vessels and 44,389 planes, and in so doing examined 768,921 alien crewmen and 894,915 citizen crewmen. Alien crewmen who deserted numbered 5,577, including 1,519 British, 1,325 Chinese, and 911 Norwegian.

The continued manpower shortage led to the extension of regulations and agreements reached with nearby countries regarding the importation of alien laborers. Since 1942, when the first agreements were made, there have been 354,896 laborers admitted to the United States, chiefly from Mexico and the West Indies. Most of these persons have been repatriated. On June 30, 1945, there remained in the United States 99,434 agricultural laborers, 64,990 railroad track workers, and 17,833 aliens employed in industries and services essential

to the war effort. These are now in the process of being returned to their homelands.

Deportations and Voluntary Departures. Importation of large numbers of alien laborers from nearby countries, augmented by the alien seamen who deserted at United States ports, plus the backlog of warrants for deportation of persons destined to European countries which could not be executed during the war years, caused a greater number of deportations and voluntary departures of deportable aliens than during any previous year on record. In all, 11,270 aliens were deported and 69,490 aliens who had been adjudged deportable were allowed to depart at their own expense without warrants of deportation. Among them were more than 8,000 Mexican nationals deported and 50,900 who returned voluntarily across the Mexican border. With the end of the European phase of the war it was possible to begin the return of deportable aliens to Europe. The first group left on May 31, 1945, on board the S. S. Cripsholm. The group consisted of 671 deportees, of whom 523 were Italian, 147 Greek, and 1 Arabian. The principal causes for deportation of aliens under warrants were: (a) entry without a valid immigration visa, (b) remaining longer than authorized, (c) entry of persons who had been previously debarred and deported. Three other groups of aliens were deported to Europe in the ensuing six months.

Border Patrol. The average size of the force of Border Patrol officers and employees in all grades of duty during the fiscal year 1945 was 1,065. These officers patrolled 8,863,416 miles, examined 1,254,533 conveyances, and questioned 4,161,573 persons. They seized and delivered to other appropriate law-enforcement agencies 75 automobiles and trucks valued at \$39,664 and recovered 25 such vehicles valued at \$15,135, restoring these to the owners from whom they had been stolen. During the year Border Patrol officers apprehended 69,164 aliens. This represents an increase of 122 percent or 37,990 aliens over last year, and 3,737 aliens more than the combined totals of the 4 preceding years. This was due to the unprecedented influx of Mexican nationals into the Imperial Valley of California, the Yuma Valley of California and Arizona, and the lower Rio Grande Valley of Texas. Patrol officers also apprehended 136 alien smugglers, 20 more than in 1944, and 1,339 violators of other laws, a decrease of 44 percent over last year.

Aliens and Alien Registration. All aliens remaining in the United States for 29 days or longer are required to register under the provisions of the Alien Registration Act of 1940. During the fiscal year 1945 there were 153,015 registrations recorded. The initial registration for aliens began on August 27, 1940, and continued through December 26 of that year. During this period 4,889,770 aliens registered as residents of continental United States. Factors determining the alien population are net immigration, naturalization, and mortality. By using the true figures for immigration and naturalizations, and estimating the alien mortality for the period, it is possible to arrive at the approximate alien population. On such a basis it is estimated that there were approximately 3,050,000 resident aliens in continental United States on June 30, 1945. This estimate does not take into account those here temporarily; that is, non-immigrants, border crossers, and imported laborers.

Naturalization. Certificates of naturalization were issued in the United States and overseas to 231,402 persons during the fiscal year ended June 30, 1945. This is a marked decrease from the highest re-

corded figures of 441,979 certificates granted in the fiscal year 1944. Of the certificates issued in 1945, 208,707 were received by civilians. The nations to which new citizens formerly owed allegiance were: British Empire 36,798; Czechoslovakia 5,561; Germany 42,720; Greece 3,838; Hungary 6,075; Italy 39,654; Poland 20,003; USSR 11,714; Yugoslavia 3,614; all other countries 38,730. During the year 9,782 petitions for naturalization were denied; there were 7,297 denied in the fiscal year 1944.

The Second War Powers Act, approved March 27, 1942, made available an expeditious naturalization procedure to non-citizens serving in the armed forces of the United States. The statute provided a judicial naturalization process for those residing within the jurisdiction of a naturalization court, and an administrative naturalization process for those serving abroad. For the fiscal year 1945, 17,029 members of the military and naval forces residing in the United States, Alaska, Hawaii, Puerto Rico, and the Virgin Islands were admitted to citizenship on the basis of petitions filed with naturalization courts. Such persons formerly owed allegiance to the following countries: British Empire 4,914; China 367; Czechoslovakia 243; Germany 2,290; Greece 378; Hungary 204; Italy 1,562; Mexico 2,316; Poland 618; Switzerland 214; USSR 334; all other countries 3,589. In addition, a total of 5,666 persons serving abroad with the armed forces of the United States were admitted to citizenship by designated representatives of the Immigration and Naturalization Service under the administrative process. Naturalizations were granted in the following areas: England 997; France 1,208; Italy 727; other Europe 127; India 246; other Asia 115; Australia 444; New Guinea 1,411; other Pacific 239; all other countries 152. Among such petitioners naturalized were 1,899 subjects of the British Empire, 326 Germans, 427 Italians, 191 Poles, 116 Russians, 590 Filipinos, 1,121 Mexicans, and 92 Chinese.

There were 165 naturalization certificates judicially granted which were revoked during the year, a reduction of 73 as compared with the preceding fiscal year. In 122 cases the Foreign Service of the State Department initiated the action because naturalized citizens of this country became permanent residents of foreign countries within five years after naturalization. In the remaining 43 cases the Immigration and Naturalization Service initiated action because naturalization was fraudulently or illegally procured.

Nationality may be lost involuntarily through committing treason against the United States or attempting by force to overthrow, or bearing arms against, the United States, provided there is conviction by court martial or a court of competent jurisdiction; through deserting the military or naval service of the United States in time of war, provided there is conviction by a court martial and dismissal or dishonorable discharge as a result of such conviction. Nationality may also be lost by departing from or remaining outside the jurisdiction of the United States in time of war or national emergency for the purpose of evading or avoiding training and service in the armed forces of the United States. In addition to approximately 5,000 American-born Japanese, whose renunciation of citizenship was approved by the Attorney General, there were 1,936 persons who expatriated themselves in the past year; 1,896 of these took affirmative action in a foreign country which resulted in loss of citizenship.

Petitions for naturalization, exclusive of over-

seas petitions by members of the armed forces, were filed by 195,917 persons. Declarations of intention filed in the fiscal year 1945 dropped to 31,195, the lowest number recorded since 1907, which was the first year in which consolidated statistical records of naturalization were made. There were 42,368 declarations filed in 1944, 115,664 in 1943, and 221,796 in 1942.

Alien Enemies. Alien enemies include natives, citizens, denizens, and subjects of countries with which the United States has been at war (Japan, Germany, Italy, Hungary, Rumania, and Bulgaria). By authority of Presidential Proclamations of December 7 and 8, 1941, and January 14, 1942, a series of regulations was promulgated by the Department of Justice affecting the conduct of citizens and subjects of Japan, Germany, and Italy, 14 years and older. (On October 19, 1942, aliens of Italian nationality were excepted from the travel regulations prescribed for alien enemies by the Attorney General.) The President, by proclamation on December 12, 1945, revoked the regulations of December 7 and 8, 1941, relating to the possession of certain prohibited articles, and to travel within the boundaries of the United States.

During the fiscal year 1945 the population of alien enemy detention camps increased by 2,784, including 116 children born at the family internment camps. In the same period, 1,658 were released from the camps; 792 for repatriation, 627 on parole, 88 for internment at large, and 119 by discharge. In addition, 32 died, leaving 7,364 in custody at the close of the fiscal year. Of this number there were 2,107 Germans, 25 Italians, 5,211 Japanese, 7 Hungarians, 2 Rumanians, and 12 others. Of the total, 1,120 (197 Germans and 923 Japanese) were persons who applied for voluntary internment to join husbands or fathers in one of the family internment camps; 3,015 were persons apprehended in continental United States under Presidential warrants; 733 persons were brought to continental United States from Alaska and Hawaii, 1,952 from Central and South America; 532 were seamen who were members of crews of enemy merchant vessels taken into custody in ports of the United States. Seven detention centers were in operation at the close of the fiscal year, four having been closed.

New Legislation. The Act of December 19, 1944, eliminated in certain cases the liability of transportation companies to fines and penalties for bringing aliens to the United States without proper documents, and authorized the Attorney General, in his discretion, to mitigate penalties incurred for failure to detain and deport alien seamen.

The Act of December 22, 1944, eliminated the requirement of lawful admission in the cases of naturalization applicants who entered the United States prior to September 1, 1943, and who, during World War II, served honorably in the armed forces beyond the continental limits of the United States.

The Act of April 30, 1945, provided for the imposition of severe penalties for procuring or attempting to procure the escape of any prisoner of war or interned enemy alien held by the United States or any of its allies.

The Act of July 3, 1945, provided additional appropriation for the fiscal year ending June 30, 1946, on behalf of certain workers entering the United States temporarily to perform labor essential to the war effort.

The Act of October 29, 1945, amended the Immigration Act of May 26, 1924, so as to add to the classes excludable on the ground of ineligibility

to citizenship certain aliens of neutral countries who applied for relief from training and service in the armed forces of the United States.

The Act of October 11, 1945, amended the Nationality Act of 1940 by providing that nationality shall not be lost, under the provisions of Sections 404 or 407 of that Act, by certain citizens residing abroad until the expiration of six years following the date the said Nationality Act was approved.

The Act of Dec. 28, 1945, expedited the admission to the United States of alien spouses and alien minor children of citizen members of the armed forces, by exempting them from the documentary requirements and from exclusion on the ground of certain physical and mental defects.

UGO CARUSI.

INDIA. A peninsular sub-continent of Asia jutting into the Indian Ocean and separated from the rest of the continent by the Himalayas. The Indian Empire, a part of the British Commonwealth and Empire, consists of British India, or the territories subject to British law, and the Indian States, ruled by native princes but under the indirect control of the British Parliament. The total area is 1,576,000 square miles. Capital, New Delhi. Summer seat of government (April to November), Simla.

Government. The King of Great Britain and Northern Ireland also bears the title of Emperor of India. The Constitution, known as the Government of India Act, 1935, provided for an Indian federation and provincial autonomy. Provincial autonomy went into effect Apr. 1, 1937, when elective legislative assemblies with responsible ministries were established in the 11 Governors' Provinces under direct British rule. In Oct.-Nov., 1939, the All-India Congress ministries in 7 of the 11 provinces resigned and on Nov. 5, 1939, the Governor General utilized his emergency powers to restore all governing powers in these provinces to the appointive British governors. Parliamentary government was retained in the other four provinces and on Nov. 24, 1941, was restored in one additional province.

The federation scheme provided for the union under a central government of the 11 Governors' Provinces and the 562 Native States ruled by Princes owing suzerainty to the British Crown. For different and often contradictory reasons federation was opposed by most of the politically vocal elements in India. Following the outbreak of World War II, the Governor General announced, on Sept. 11, 1939, that no further steps toward federation would be taken until peace was concluded.

In the meantime executive powers were concentrated in the hands of the Governor General, or Viceroy, who is appointed by the Crown, usually for five years, and assisted by an appointive Executive Council, composed of 15 high officials (11 Indian and 4 British) responsible for the various administrative departments. The Governor General also holds the separate office of Crown Representative (established Apr. 1, 1937) through which he performs the functions of the Crown in relation to the Native States. Pending the federation of the Governors' Provinces and Native States, the Governor General remains under the direction of the Secretary of State for India in the British Cabinet, and the Central Legislature of British India, established in 1921, continues in existence. The Legislature consists of a Council of State of 32 elected and 26 nominated members (serving five years) and a Legislative Assembly of 102

elected and 39 nominated members (serving three years). The Central Legislature's actions are not binding on the Governor General and his Cabinet.

Governor General and Crown Representative, Field Marshal Viscount Archibald P. Wavell, who was appointed June 18, 1943. For political and other developments during 1945, see below.

Events, 1945. The political deadlock with respect to constitutional reform in India which existed since the failure of the Cripps mission in 1942 (see YEAR BOOK for 1942, pp. 320-321) persisted with little change of emphasis through the first five months of 1945. The Conciliation Committee of the Non-Party Leaders' Conference formed by the liberal leader Sir Tej Bahadur Sapru in December, 1944, continued its work without participation by the President of the Moslem League, Mohamed Ali Jinnah. The announced purpose of the committee was to ascertain exactly what the various Indian communities wanted and assess the measure of agreement among them, and then to recommend on its own responsibility, regardless of party or communal considerations, a just and practicable solution of the existing deadlock. Mohandas K. Gandhi, speaking for the large Hindu majority, gave his approval, but that of the Moslems was officially withheld.

New Proposals. In March a proposal for ending the deadlock was made by Sir Zafrulla Khan, chairman of the Indian delegation to the Commonwealth Relations conference just concluded in London. The recommendation was that the British Government should at once announce its readiness to accept any settlement upon which the Indians might agree within one year after the cessation of hostilities with Japan. Failing such a settlement within the given period, Britain should herself frame a provisional constitution for India by which India would secure dominion status. This would remain in force as long as Indians themselves were not agreed upon an alternative. This proposal was received with considerable interest in Britain but in India it failed to stir the opposing forces from their entrenched positions.

At the end of March Field Marshal Viscount Wavell, the Viceroy, left India for London to discuss India's role in the Far Eastern war and to review the political situation. Shortly after the Viceroy's departure Sir Tej Bahadur Sapru sent him a telegram containing a new plan for India worked out by the Conciliation Committee. Under this plan India should at once be declared an independent state and treated as a dominion, even though, pending the coming into force of a new constitution, the Government of India might have to be conducted in conformity with the provisions of the Act of 1935. A National Government should be substituted for the existing Executive Council, by either of two methods outlined in the telegram.

Jinnah, commenting on the proposals, said that if they were accepted, Moslem aspirations and their national demand for the Moslem state of Pakistan "would be torpedoed by this subtle outflanking movement." Moslem India, he said, would not accept any attempt to change the existing constitution in any way which would mean a united India. If the British Government were stampeded into it, he added, the British Government alone would be responsible for the disastrous consequences to which it might lead.

Other proposals appeared at the end of May in a pamphlet published by C. R. Rajagopalachari, former Congress Premier of Madras, a moderate who resigned from the Congress Party in 1942 when the Cripps offer was refused. In the pam-

phlet, which was entitled "Reconciliation: Why and How," Rajagopalachari urged action by the British at once in restoring responsible government to the provinces and offered several schemes by which the details might be worked out.

In the meantime Lord Wavell's unexpectedly long absence in England, the end of the war in Europe and the imminence of a general election in Britain gave rise to rumors and speculations in India. On April 17 Gandhi disowned the Indian delegation to the conference at San Francisco as "camouflage" and "worse than no representation" because India should have elected representatives or none at all. After an extended criticism of the domination of one nation over another he refused to say more because he was observing a period of silence.

Bhulabai Desai, leader of the Congress Party in the Central Assembly, let it be known that he too had submitted proposals to the Viceroy, looking towards the Indianization of the Executive Council. The Congress press took the line that there must be a national government responsible to the central legislature, a proposal which would give the approximately 250,000,000 Hindus domination over the approximately 90,000,000 Moslems. Indian industrial leaders, including active supporters of Gandhi, who were interested in the scheme for planned development which had been announced in 1944 (see YEAR BOOK for 1944, p. 292), argued that India's urgent needs could not be met until the energies of Indian leaders were enlisted for creative work in the economic as well as in the political sphere.

New British Offer. In the first days of June the tension increased. Lord Wavell reached Karachi on June 4 on his way back from London. Two secret meetings of the Executive Council were held on June 5th. Leopold S. Amery, Secretary of State for India, said in London on June 6 that British and Indians alike wanted the deadlock ended. Finally, on June 14, a White Paper issued in London proposed the reconstitution of the Viceroy's Executive Committee as an all-Indian body except for the Viceroy and a commander-in-chief. The new Executive Council would be appointed by the Viceroy from among Indian leaders selected by a conference of recognized party leaders, including Gandhi and Jinnah, and acceptance of the offer would be without prejudice to the future permanent form of Indian government or the Cripps offer of Indian home rule, which was renewed. The proposals of the White Paper, as presented by Amery in the House of Commons, were commended by Labor Deputy Prime Minister Attlee and by Sir Stafford Cripps.

The proposal was at first received calmly in India. The Viceroy called a meeting of leaders of 21 political factions at Simla on June 25. Gandhi, who maintained amiable relations with the Viceroy in the interval, refused to attend and Moslems charged that he had torpedoed the conference. On the third day of the conference the inevitable conflict between Hindus and Moslems came to a head and on June 29 negotiations between the Congress Party and the Moslem League broke down. The Moslem League wished to name all the Moslems nominated for the Council, but the Congress Party, which claims Moslem membership, demanded the right to make at least one Moslem nomination. The Viceroy issued a statement on July 14, when the conference ended, commenting on the failure of conversations after the adjournment of June 29, asking the members to refrain from recriminations.

India and Whitehall. When the Labor Government came into power in Britain Indian opinion showed some disappointment that an end was not put to the India Office, but on the whole it indicated some satisfaction with Lord Pethick-Lawrence, newly appointed peer and new Secretary of State for India. In his maiden speech in the House of Lords the new appointee made a good impression in his comments on the Indian situation and with his announcement that Lord Wavell would soon return to London for consultation.

In the meantime Lord Wavell held a conference with the Indian provincial governors—the third since he became Viceroy—and obviously made plans for whatever changes might follow the elections for the Central Assembly in the winter and the provincial elections in the spring of 1946.

Labor Government Plan. Official statements by Lord Wavell and Prime Minister Attlee on Sept. 19 outlined revised plans for the early realization of full self-government in India. The starting point was given as the general election, after which the Viceroy would discuss with representatives of the provincial legislative assemblies, the Cripps proposals ("1942 Declaration") for convening the constitution-making body which it was the Government's announced intention to set up. Discussions with representatives of the Indian States were also planned. Although the Cripps proposals remained the basis for discussion, they lost their former rigidity and any alternatives or modifications which might prove preferable were now open to adoption. The Cripps proposal was that a new Indian union be established, constituting a dominion equal in every respect to other British dominions, and that steps be taken after the war to set up an elective body charged with framing a constitution.

Reception of the plan in India conformed to pattern. The Working Committee of the Congress Party called the program "vague, inadequate, and unsatisfactory, and in its three-day meeting ending Sept. 23 the All-India Congress Committee supported the Working Committee. Prolonged cheering greeted the declaration by Pandit Jawaharlal Nehru, Congress Party leader recently released from custody, that Congress would not again attempt negotiation with the Moslem League, which had, he said, tried to humiliate Congress every time they made an approach. Lord Pethick-Lawrence said in comment that he was neither disturbed nor disheartened.

Internal Friction. After the Labor Government's proposals were made the situation in India rapidly deteriorated. Hindu-Moslem riots in Bombay on Sept. 26 resulted in death to 17 persons and injuries to 75. Rioting occurred in Calcutta in mid-November, with attendant casualties (including 4 Americans dead and 30 injured) over opposition to trials of former Indian officers of the so-called "Indian National Army" who went over to the Japanese. Pandit Jawaharlal Nehru, who became increasingly active, said in an election speech at Lahore on Nov. 20 that India would wait for no more declarations or promises from New Delhi and London, but would solve the issue of freedom itself.

Moslem interest in the Palestine issue was very marked at this time. Jinnah said on Oct. 3 that "President Truman's reported Palestine immigration proposal is an unwarranted encroachment on another country, monstrous and unjust." At a public meeting in Bombay on Nov. 8 he said that Moslems would not remain mere spectators of the Arab struggle against British imperialism and against the illegal immigration of Jews into Pales-

tine and criticised "President Truman's effrontery" in putting pressure upon the British Government to allow 100,000 Jews into Palestine when he himself would permit only a few Indians to enter the United States.

New British Statements. On Dec. 4, Lord Pethick-Lawrence in the House of Lords and Herbert Morrison in the House of Commons made identical statements on India which emphasized that the setting up of a constitution-making body in India was a matter of the greatest urgency. The statements contained a warning against attempts to solve the constitutional issue by force and announced that a Parliamentary delegation would soon visit India with a view to removing misunderstandings. The *Hindustan Times* in its next issue headed its comment "A Purposeless Statement."

The Viceroy, speaking on Dec. 10 at the annual meeting of the Chambers of Commerce, made an earnest appeal to Indian leaders to exercise moderation and to avert the civil violence and strife which threatened the country. Lord Wavell said that India stood "at the golden gate of political and economic opportunity" and yet "at the edge of tragedy."

Industrial Planning. The authors of the Bombay Plan issued a second part of their scheme in the middle of January. The Bombay Plan of National Development, first issued early in 1944, was the work of 8 leading industrialists who were either supporters of the Congress Party or were strongly nationalist in their political outlook. Its proposals included the investment of 10,000 crores of rupees in industrial development and the doubling of the per capita national income within 15 years.

In the second part of the report the authors expressed their belief in individual initiative and enterprise, but added that the interests of the community should be safeguarded against the abuse of individual freedom. The State, therefore, should play a positive rôle in the direction of economic policy, according to the report.

A statement on industrial policy issued by the Government of India, on April 23, indicated decisions reached on the policy of industrializing India rapidly after the war. The development, in cooperation with industry, was to be planned so as to maintain a balance between basic and consumption goods and to give India the benefit of a widely spread industrial structure and its integration with agriculture. In order to make their coordinated development possible, 20 important industries were to be taken out of the charge of the provincial governments and made central government subjects. This report followed the lines previously suggested by the Reconstruction Committee of the Viceroy's Council, formed in 1943. The head of the committee since August, 1944, has been Sir Ardeshir Dalal, one of the eight original proponents of the "Bombay Plan" and an executive of Tata Iron and Steel Co., Ltd.

The statement was almost immediately attacked—first on political grounds and then on its failure to promise unlimited tariff protection to all industries, its qualifications with respect to quality and price in the purchase of domestic manufactures, and its control over concentration of assets according to communities. Hindu and Parsi business interests were quick to call the plan "simple bureaucracy," vague and blurred, and a dangerous concentration of power in the Government.

Report on Bengal. The Bengal famine of 1943 (see YEAR BOOK for 1943, p. 281) revealed such deep-rooted local maladministration that efforts were still being made to get at the roots of the

situation. The Bengal Administration Inquiry Committee, 1944-1945 (the Rowlands Committee) published its report in Britain in October, 1945. The accounts of corruption in the administration were not unexpected, but the committee also criticized the land-holding system and advocated the setting up of a separate Ministry of Land Reform.

Richard Gardiner Case, former Australian Ambassador to Washington, who undertook the Governorship of Bengal when a more vigorous administration was demanded in December, 1943, resigned in 1945, and Frederick Burrows, a British railway trade union leader, was appointed to succeed him after Casey's retirement in February, 1946. Rice prospects at the end of the year were not good and imports from Burma and Siam in 1946 were allotted by the Combined Foods Boards in November, 1945.

Other Events. It was reported from Tokyo on August 23 that Subhas Chandra Bose, Indian political leader who headed the puppet government which the Japanese planned for India, died in an airplane crash in Formosa on Aug. 19. The report, if true, meant that the British authorities would be relieved of a difficult problem, for Bose had a considerable Indian following. India adhered to the Bretton Woods agreement at the end of December. Indian journals almost without exception gave notice, however, that India would not consent to the scaling down of the British debt to India—the largest of the debts involved in the American requirement that Britain should scale down sterling debts.

Population. According to the census of 1941 the population of the country was 388,997,955, most of whom (87 per cent) live in villages. The small percentage of city dwellers live in such key cities as Calcutta, Bombay, Madras and Hyderabad. The density of the population (about 245 per square mile) is one-third of that of England and Wales (724) or Belgium (723) and less than that of Switzerland (265 per square mile).

The birth rate rose from 31.3 per thousand in 1931 to 34.1 in 1938. The death rate decreased from 24.9 in 1931 to 22.0 in 1941. The infant mortality rate is 162 per thousand.

Although the Indian population includes more than 45 groups speaking nearly 200 different languages, classification is commonly made according to the following religious communities: 66 per cent Hindus, 24 per cent Moslems, and the remaining 10 per cent of a wide variety of racial groups and creeds.

Education. Substantial increases in the enrollment of students in schools and colleges have caused an increase in literacy from 6.9 per cent in 1931 to 12.2 per cent in 1941. The level of literacy is considerably higher in the native states, with Travancore's 47.7 per cent, Cochin's 35.4 and Baroda's 23.0.

A solution to the problem of illiteracy was sought in a plan devised by the Educational Adviser to the Government of India in 1944 (the "Sargent Plan"). The plan contemplates a 40-year program of educational expansion, with free compulsory schooling for all children from 6 to 14. There would be an expansion of all of the existing recognized institutions: elementary, secondary (academic and technical), university, specialized, and adult.

Production. India is the world's largest producer of sugar cane, mica, jute, and lac, and ranks second in cotton, tea, and manganese. It has the largest reserves of high-grade iron ore in the world and the largest single iron and steel plant in the British

Commonwealth. The other chief industries are textiles, sugar refining, cement, soap, shoes, and chemicals. Many new industries were started after World War II began. Although India is primarily an agricultural country she is ranked among the 8 leading industrial nations.

Trade and Finance. Foreign trade has increased during the war and an export balance has been maintained. Exports rose from 93.43 crores of rupees in 1944 to 109.23 in 1945, while imports rose from 52.22 to 93.90 in the same period. United States trade with India showed a marked increase during the war years. Total U.S. exports increased from an annual average of \$35,000,000 in the years 1936-1939 to \$777,000,000 in 1944, while United States imports from India rose from \$75,000,000 to \$145,000,000 for the same dates.

India emerged from the war a creditor nation. She reduced her prewar sterling debt of 4,000,000,000 rupees to a negligible sum and accumulated sterling credits amounting to more than \$4,000,000,000 on Mar. 31, 1945. This creditor position was due largely to purchases by the United Kingdom and military and other expenditures made on behalf of the United Kingdom. India has also purchased its company-managed railways and discharged a number of domestic and foreign obligations not covered in the above transactions.

—ALZADA COMSTOCK.

INDIAN AFFAIRS, Office of. A branch of the U.S. Department of the Interior which has the management of all Indian affairs and of all matters arising out of Indian relations. It is responsible for upkeep on about 200 Indian reservations and supervises the education of 36,000 Indian children. Commissioner of Indian Affairs in 1945: William A. Brophy. For Indians, see also ALASKA.

INDOCHINA. The southeastern peninsula of Asia, consisting of Burma, Federated Malay States, French Indochina, Siam, Straits Settlements, and the Unfederated Malay States.

INLAND WATERWAYS CORPORATION. A Division of the U.S. Department of Commerce (formerly of the War Department) incorporated to carry out sections of the Transportation Act of 1920, to make possible the coordination of rail and water transportation in the United States. It is organized along the lines of a trunk-line railroad and functions entirely on funds derived from operations. It operates barge lines on several important water routes. Chairman of the Board and President: John S. Powell, Acting.

INSECT PESTS AND PLANT QUARANTINES. Research conducted cooperatively by the Bureau of Entomology and Plant Quarantine with Federal, State, and other agencies, has developed new insecticidal materials and applications which promise far-reaching effects upon the future control of insect pests. With the ending of the war, requirements by the armed forces have decreased appreciably, making available for agricultural and civilian use such new developments as DDT (dichlorodiphenyl-trichloroethane) and the so-called aerosol "bombs." The more promising recent methods and materials are being adapted to the control of pests of major importance, and to maintain the production of food, lumber and fiber, and information on these new methods is being made available to farmers, householders, and the industries concerned. Intensive study is being made of the possible limitations or hazards involved, and of pos-

sible more suitable weapons in this constant battle against injurious insects.

Plant Quarantines. Developments in the war situation have strongly affected plant-quarantine enforcement at maritime ports. Ship arrivals, during the fiscal year ended June 30, 1945, increased 30 per cent over those of 1944 to a total of 35,555. The Army program for returning troops from foreign areas by airplane accelerated the rapid growth of air-borne commerce. During the fiscal year 1945, 45,728 airplanes were inspected at 42 ports of entry, an increase of 112 percent over the previous year. It was necessary to provide plant-quarantine protection at 5 ports formerly without this service, and inspection has now been inaugurated in Alaska. Nearly 65,000 freight cars were inspected upon crossing the Mexican border, and more than 9,000 were fumigated as a condition of entry; these figures represent a decrease in this activity over the previous year, due to a reduction in traffic and the employment of procedures for waiving fumigation when it can be done without additional risk of pest entry. In addition, 5,390 Pullman and passenger coaches and about 4,800,000 other vehicles and over 930,000 pieces of baggage were inspected, upon arrival from Mexico, in cooperation with U. S. Customs. The use of tight railway refrigerator cars for the bulk fumigation of plant material with methyl bromide was authorized during the year.

Insect Identification. Over 59,000 insect specimens were identified during the fiscal year 1945, as a basis for the institution of proper control or quarantine action, or in connection with experimental work. In addition, approximately 6,000 samples of insects and mites involved in human-health problems were identified for the Army, Navy, and Public Health Service. Direct assistance or instruction in insect identification and classification was given many officers of these branches of the service.

New Insecticides and Methods of Application. Solutions, emulsions, powders, and aerosols containing DDT were formulated and tested, and specifications worked out for commercial grades of DDT and certain DDT preparations. Methods and formulations for its use have been used effectively by the armed forces. Preliminary recommendations have been made for the use of such insecticides against some insects, especially household pests such as mosquitoes, flies, bedbugs, and cockroaches. Extensive experimentation has shown formulations containing this important new material to hold much promise against a number of insects injurious to agriculture. Although not effective against all, it will be useful against many injurious to livestock and crops. Certain of its limitations still remain to be worked out before DDT can be recommended for use against some pests.

A new insecticidal material, the active principle of which is the gamma isomer of benzene hexachloride, was tested and found to be more toxic than DDT to some insects and less toxic to others.

Of special interest is the extension of the usefulness of the aerosol method of dispersing insecticides, both the liquefied-gas aerosol and those in the form of smokes. Varied types of distributors, whereby a concentrated spray, broken into very fine droplets, can be effectively applied from the air, have enlisted airplanes to apply sprays. On certain types of foliage good coverage over an area as large as an acre can be obtained with as little as one gallon of concentrated spray. This opens up new possibilities for the application of

liquid insecticides from the air. Similar improvements have been made in equipment for ground work. Further tests were made in the adaptation of heat-generated, or "smoke," aerosols. Tests of the latest models of power-blowers, for dispersing insecticides in finely atomized form, proved that the mist blower is especially well adapted to treat shade and roadside trees, and much less spray material is used by this method.

Insect Repellents. Two important developments were the repellents dimethyl phthalate, which can be applied to the outer garments to give protection against chiggers and to some extent against ticks; and benzyl benzoate for impregnation of clothing to furnish protection against mites which transmit scrub typhus in the Pacific area. It was found that a combination of dimethyl phthalate, Indalone, and 2-ethylhexanediol was an effective repellent of malaria mosquitoes in the United States—more generally so against mosquitoes and biting flies than any of these compounds alone.

Mosquitoes. The research with DDT has shown it to be outstanding in its toxicity to mosquitoes. Properly applied as a residual spray to the walls of dwellings or barns, it remains effective for several weeks or months, killing mosquitoes and flies that come in contact with treated surfaces. It has also residual value in controlling malaria mosquitoes. Mosquito-control workers have for the first time a material that can be applied from various kinds of aircraft to destroy at one operation larvae in the water and adult mosquitoes on the wing. Liquid larvicides were found more effective in the destruction of larvae than were dusts.

Screwworms. In southern Texas and southern Florida, where the screwworm passes the winter, the infestation in the early spring of 1945 was the heaviest for several years. Favorable weather stimulated breeding and the northward migration was rapid. The stage was set for a serious outbreak; however, hot, dry weather early in the summer checked the spread, and a general use of smear 62 held the insect to moderate abundance. Two new smears that contain chlorophenoxathin were developed for the treatment of screwworm-infested animals. The new smears showed a distinct advantage over those containing diphenylamine in that they did not become hard and crusty on the wound after the benzene had evaporated.

Stablefly (dog fly). In tests for the control of the stablefly (dog fly), in marine grass deposits along the coast of western Florida, it was found that 0.5 per cent of DDT in bay-water emulsion applied at the rate of about 2 gallons per 100 square feet of grass surface gave effective control of the emerging flies.

Codling Moth. In contrast to the extreme severity of the infestation in 1944, the codling moth was considerably less abundant and more readily controlled in 1945 in the Middle West and East. In the Northwest, the insect was a little less abundant than usual. In tests conducted in 1945, DDT continued to maintain its superiority over standard materials in control of this moth in New York, West Virginia, Indiana, and Washington. From $\frac{1}{2}$ to 1 pound of powdered technical DDT alone per 100 gallons of spray, or 4 to 8 ounces of DDT in combination with half-strength lead arsenate, cryolite, nicotine bentonite, or xanthone, were equal or superior to either material at usual full strength alone, or with oil. The use of DDT continued to stimulate the abundance of orchard mites, although the rainy season east of the Rockies prevented the mite population in many orchards from reaching extremely high levels.

Oriental Fruit Moth. The new method of producing the important oriental fruit moth parasite, *Macrocentrus ancylicorvus* Roh., from the potato tuber worm was further developed for use under eastern conditions. The Oriental Fruit Moth Survey was continued during the summer of 1945 in the States of Colorado, Idaho, Montana, Oregon, Utah, and Washington, as a result of which this moth was found for the first time in the States of Oregon and Washington. Additional infestations were found in Colorado, Idaho, and Utah.

California Red Scale. In small-plot fumigation tests at Whittier, Calif., against this insect on citrus, kills were obtained under plastic-treated gastight tents with one-third to two-thirds the amount of hydrocyanic acid gas that was required to effect approximately the same kills under canvas tents. Somewhat better kills of the insect were obtained when the hydrocyanic acid was introduced with a blower applicator than with the vaporizer now in common use.

Japanese Beetle. In much of the old infested territory the beetles were less abundant in 1945 than usual. The cloudy, wet weather which prevailed over much of the infested territory hindered activity by the beetle. Experimentally, one to three applications of DDT (micronized with an equal quantity of pyrophyllite and with glue as a wetting agent) at the rate of 1 pound to 100 gallons of spray gave almost complete control of the adult beetle on peach, early apple, grape, blueberry, and a miscellaneous group of ornamental and shade trees and shrubs. In soil tests a dosage of 25 pounds of DDT per acre proved more effective against third-instar larvae than 1,000 pounds of lead arsenate and to be as effective after 75 weeks in the soil as when first applied. A large-scale field experiment to determine the possibility of controlling this insect with DDT was undertaken at an established, isolated infestation at Blowing Rock, N.C. Results of the milky-disease distribution program for control of the larvae continue to be favorable. Revised Japanese beetle quarantine regulations were issued.

European Corn Borer. Infestation in 1945 was generally somewhat higher in the Corn Belt than in 1944, while in the Eastern States the population was about the same in both years. Heavy infestations in sweet corn and in potatoes were reported from a few isolated places.

Imported parasites that have become well established in the eastern states were collected and released in the more heavily infested sections of the Corn Belt in cooperation with interested states.

Preliminary tests of insecticide applications of DDT and ground stems of *Ryania spectiosa* were quite promising against this insect.

Grasshoppers. Adult and egg surveys in the fall of 1944 indicated that the grasshopper infestation in 1945 would be of approximately the same extent and intensity as that in 1944. Cool, wet weather, which prevailed over much of the infested area throughout the spring months of 1945, greatly reduced grasshopper hatching and development and delayed control operations.

Chinch Bugs. Although surveys in the fall of 1944 revealed large numbers in hibernation, the serious damage in prospect for 1945 was largely prevented by continuous cool, wet weather during the spring and early summer. Tests showed dust mixtures of DDT to be very effective as barriers, but for application directly on the bugs infesting sweet corn, popcorn, and oats, good control required heavy dosages.

Stored-Grain Insects. Tests in a commercial flour

mill showed that fumigation of machinery units every 3 weeks held the insect infestation at a sufficiently low level to insure the production of insect-free flour. Carbon tetrachloride and various mixtures of carbon tetrachloride with ethylene dibromide or trichloroethylene gave promising results as grain fumigants. Wrappings coated or impregnated with DDT, acrylamide, or a trichlorobutyramide were highly effective in preventing insect entrances into packages of cereals in experimental studies. Sprays containing 5 percent or less of DDT dissolved in refined deodorized kerosene or in water suspension or emulsion have been recommended for treating walls and woodwork of warehouses, flour mills, and empty grain bins. Weevils and other insect pests of stored grain and cereal products are killed as they contact the DDT residues while crawling on or burrowing into the treated walls or woodwork. Because of the poison hazard, care must be taken to avoid contamination of grains and food products with the spray.

Vetch Bruchid. Practical controls of this weevil in Oregon was secured, using a single application of 25 pounds of a dust containing 3 per cent DDT applied at the time of appearance of first pods.

White-Fringed Beetle. Important developments in equipment for insect control and extensive use of new insecticides and new formulas for others, particularly concentrated sprays, have greatly reduced costs and have permitted wider and more complete coverages. One important new infestation was found during 1945 in southern Alabama, and minor extensions of the infested areas in Florida and Mississippi. In North Carolina a few small infestations were found in seven counties not previously known to be infested.

Vegetable Insects. Special emergency surveys of insects that attack vegetables and their control requirements have been continued, in cooperation with State workers, industry, and other agencies. DDT in dust and spray forms and as an aerosol has proved to be very toxic to a number of common insect pests affecting vegetables; however, it has shown low toxicity against some important vegetable insects, notably the Mexican bean beetle, the tobacco hornworm, the turnip aphid, and a few others. The tolerance of vegetable plants to this insecticide has been high. Dust mixtures containing 1 or 2.5 per cent of DDT were superior to all other insecticides tested during the spring of 1945 to protect cabbage in South Carolina from caterpillar damage. If current research reveals that the use of DDT on cabbage does not incur a harmful residue hazard, or result in plant injury under the widely divergent conditions where cabbage is grown, it appears that this will prove to be a very effective remedy for cabbage caterpillars. Until more definite knowledge on the residue situation is obtained, its use on cabbage and related crops will be subject to the same limitations as that of arsenic and fluorine compounds. Large-scale tests in commercial sugar beet fields demonstrated that one application, by airplane or with conventional ground equipment, of a dust containing 5 per cent of DDT at the rate of 30 to 40 pounds per acre has exerted a control of *Lygus* plant bugs surpassing that of two applications of the pyrethrum-sulfur or sulfur-dust mixture. Studies indicated that the use of DDT did not affect adversely the yield of sugar beet seed or its viability. Early in 1945 the DDT aerosol with methyl chloride as the propellant agent was used on large field plots of peas for pea aphid control, and encouraging results were

obtained. In the greenhouse DDT in aerosol form was found to be very effective against several species of insects affecting vegetables grown under glass. Under greenhouse conditions the aerosols were applied with special dispensers. Tests and observations on the effect of applications of insecticides by airplane, in cooperation with other agencies, have shown that rotenone dust applied to beans by airplane in North Carolina was not so effective against the Mexican bean beetle as when applied by ground machine. In Washington, cryolite dust applied with ground equipment to potato fields gave better results against potato flea beetles than when applied by airplane. In Washington and Oregon good results were obtained from aerial applications of dust mixtures containing DDT or rotenone for control of the pea weevil and the pea aphid. In these tests the airplanes worked as well as ground equipment under comparable conditions when the same insecticide was used. Satisfactory results were recorded with airplanes to apply DDT dusts for control of *Lygus* plant bugs and the beet leafhopper on sugar beets grown for seed in Arizona. Hornworms and flea beetles on tobacco were controlled successfully in North Carolina by airplane applications of cryolite dust mixtures. The results obtained thus far indicate that the use of aircraft for applying insecticides to some vegetable and tobacco crops has a promising future.

Sweet Potato Weevil. Extensive expansion of production and distribution of sweet potatoes during the past several years, and the resultant increase in production and distribution of sweet potato seed stock, has greatly increased the hazard of dissemination of the sweet potato weevil, as evidenced by recent findings of this weevil in a number of new locations outside the previously known infested areas.

Cotton Insects. In each of the eleven states where the boll weevil is a serious pest it caused more damage in 1945 than during 1944. Late plantings, followed by a rainy season over most of the Cotton Belt, were favorable for weevil development and the shortage of labor for applying calcium arsenate helped to increase losses. In experiments against cotton pests it has been found that DDT is not as effective against the boll weevil or the cotton leafworm as calcium arsenate, and causes an increase of the cotton aphid and the common red spider. It has proved useful for bollworm, cotton flea hopper, and several other mirids, stinkbugs, onion thrips, tobacco thrips, and beet armyworm. In laboratory tests 2.5- and 5-per cent DDT dusts caused low mortality of the boll weevil, but 10-per cent dust approached calcium arsenate in effectiveness. In field plots several applications of 5-per cent DDT dust failed to control the boll weevils; 2.5 per cent added to calcium arsenate did not increase the mortality or the yield of cotton as much as did the calcium arsenate treatment. Preliminary experiments late in the season of 1944 and further tests in 1945 indicated that DDT was the most promising material that had been used against the pink bollworm. Dust applications of approximately 15 pounds per acre of DDT in pyrophyllite, beginning when the cotton bolls were large enough for the pink bollworm to infest them, and repeated at 5-day intervals, caused from 53 to 94 per cent reduction in larval populations in the 1944 tests. The gamma isomer of benzene hexachloride seems to have considerable promise for use against the boll weevil, the cotton aphid, and other sucking insects.

Forest Insects. In investigations of forest insects,

the spruce budworm was found in June, 1945, to be generally distributed throughout the Adirondack area in New York and the spruce-fir area in Vermont. Most of the infestation, by previous standards, was light, but defoliation was noticeable in a few places. The outbreak of the Engelmann spruce beetle in Colorado continued unabated, killing over 1 billion board feet of Engelmann spruce in 1944, and bringing the total loss of timber to approximately 2 billion board feet during the past 3 years. Extensive surveys showed the infestation to be increasing in area and severity. The discovery that this beetle hibernates beneath the bark at the base of the trees during the second winter, a habit unknown among closely related beetles, has an important bearing on control methods. In 1945 the program of experiments in the control of forest insects (such as gypsy moth, spruce budworm, pine tip moth, pine spittle bug, hemlock looper) with concentrated DDT sprays distributed from an airplane, has been greatly expanded and improved spray formulas have been tested. Considerable progress in improving and simplifying distributing apparatus has been made through cooperation with the Bureau of Plant Industry, Soils, and Agricultural Engineering of the U.S. Department of Agriculture. Special emphasis has been given to airplane applications of DDT in Quebec, Ontario, New York, and Colorado to determine whether the spruce budworm can be economically controlled by this method. Preliminary results are very encouraging.

DDT has also been found to be very effective against the group of elm insects suspected of transmitting the elm virus disease organism. Because general use over large forested areas cannot be recommended until the possible detrimental effects to beneficial insects, fish, and wildlife have been determined, large wooded areas were treated in 1945 for a study of this problem. Results are not yet available. Tests with various types of airplanes have demonstrated that the helicopter may help in treating woodland areas too large for economical treatment by ground equipment and too small for economical fixed-wing plane applications.

Gypsy Moth. In connection with control activities against the gypsy moth, emphasis was placed on use of the sex attractant to trap male moths and on manual types of surveys to delimit the area of infestation and locate all severe infestations. Control measures included cooperation in extensive experiments with DDT in several of the areas most heavily infested, particularly in Pennsylvania and in the New York-New England section. In tests during 1945 the insect was controlled with $\frac{1}{4}$ pound of DDT in one gallon of solvent per acre. This season's work has demonstrated conclusively that DDT is the most effective and economical insecticide discovered for the control of the gypsy moth, and its distribution by aircraft and improved spray equipment offers for the first time a practical means for controlling woodland infestations of this insect.

Bee Culture. Further evidence of the value of feeding a pollen-soybean flour supplement in winter to honeybees has been obtained. This resulted in better colony development early in the spring than did the generally accepted method of heavily packing colonies for winter without supplemental pollen feeding. In limited tests, bees fed clover pollen supplemented with soybean flour reared more brood than those fed unmixed ryegrass, star-thistle, partridge-pea, and clover pollen

alone, the figures being 32,400 bees (over 6 pounds) per pound of supplement against 2,350 bees (about $\frac{1}{2}$ pound) per pound of unmixed ryegrass pollen.

Foreign Parasite Introduction. Special emphasis was placed on the importation of parasites of the vegetable weevil and the cotton boll weevil from South America. A new project for the biological control of the Klamath weed was initiated in the fall of 1944. Large-scale shipments of two leaf-feeding beetles and a root borer that attack this weed were received from Australia. These are being tested on several economic crops, and field releases of one species have already been made in northern California.

Dutch Elm Disease. Operations in connection with the Dutch elm disease control program were concentrated on determining where the disease occurs, on advising elm owners of the nature of the trouble, and recommending ways of combating it, and on testing methods of disease control in selected areas. There was some extension of the known limits of infection, and this afforded a basis for establishing quarantine regulations to prevent movement of host material to areas still clean.

White Pine Blister Rust. The control program was conducted on much the same basis as in 1944, and, in general, accomplishments were about the same. During the fiscal year ended June 30, 1945, over 16 million ribes bushes were removed from 989,372 acres of control area, of which 490,014 acres were initial eradication and 479,357 acres were rework.

P. N. ANNAND.

INSURANCE. With the sudden and generally unexpected end of the war with Japan in August, the insurance world promptly put into action the plans which had been made to reeducate returning veterans. This has become an important part of the work of these companies in revamping the personnel structure which had been reduced to skeleton-like proportions during the war. Executives of insurance companies were greatly concerned with the world trends, and this was emphasized at the close of 1945, by Dave E. Satterfield, executive director of the Life Insurance Association (formerly Life Presidents' Association) who said: "I warn the leaders of life insurance to stand firm against the fears that are loose throughout the world. Reassert positively and with authority the principles and philosophy of the democratic system. Remember that fear of the future or fear of its uncertainty can induce paralysis menacing those who have been given the responsibility of formulating the policies of the business."

Aside from the change from war to peacetime operations, 1945 saw a great change in the thinking of all insurance executives, as the result of their field coming under the Interstate Commerce laws. Most insurance companies were anxious to put their houses in order and they devoted and are still devoting much time to the task—for they will be under the Interstate Commerce regulations and control on Jan. 1, 1948. If the individual States do not adopt regulatory laws by that time, companies will then automatically be under Federal control. The entire picture has given company executives much concern and they are hopeful that the overall picture will improve during the coming two years.

Life Insurance. The record for 1945 was a great one. Even though the greater portion of the year was in the hands of severely reduced production

forces (these were not effectively increased with the return of Peace), by the end of the year about 71,000,000 policyowners had insurance of about \$154,800,000,000 in force in all so-called "legal reserve" companies. And during 1945 new life policies placed in force in these companies totalled approximately \$15,300,000,000, the highest yearly total since 1931, and a good 5 per cent over the figure for 1944. The companies grouped in the above figures had a total investment in Government bonds of about \$22,600,000,000 in all classes of securities, a figure which is estimated to represent about 50 per cent of all assets.

Marine Insurance. The sudden end of the war with Japan came about at a time when the loss ratio had been reduced, due to the improved situation at sea. Due to this better experience, rates had been lowered, and the companies promptly started laying grounds for the resumption of underwriting marine risks under peacetime conditions. The so-called "Inland Marine" risks (transit, jewelry, fur, and contract "floaters") showed approximately a 10 per cent increase in premiums over those of 1944. This is a sizeable improvement when it is recalled that 1944 produced a new high total of about \$97,500,000 of premiums. It has been found that increased valuations of insured articles has counterbalanced largely whatever reduction in the number of insured units may have occurred.

Fire Insurance. During the year, the New York Trust Company, one of New York's oldest banks, gave recognition to the economic and social usefulness of fire insurance in America. Surveying the financial growth and development of fire insurance, it pointed out 90 billions of dollars of fire insurance is in force country-wide today, more than twice the volume at the end of the first World War. Fire insurance costs have declined about 40 per cent since 1921. From the angle of fire insurance executives, there was great interest in the Empire State Building tragedy, when an Army bomber crashed into it. The resulting heavy damage to the structure would normally have been covered under the "Extended Coverage Endorsement" attached to most fire insurance policies. In this case the owners did not carry this form of protection, as they felt the cost was too high (two cents per hundred dollars of insurance for protection against the risks of damage by hurricane, aircraft, explosion, etc.). Their opinion might be justified by some when it is stated that the rate for fire insurance on the same building was approximately one cent per hundred dollars of insurance. The great loss in this case seems to vindicate the fire companies and the rating bureaus, as the cost of the insurance, in the case of Empire State, would have been dwarfed by the amount of the claim. It now appears that owners of other large fireproof buildings are minus this essential protection—and also because they feel the rate is too high.

As for the 1945 total of fire losses, the experience continued upgrade at an alarming rate. 1944 losses had hit the all-time high of approximately \$410,000,000 and the 1945 figure, according to wholly unofficial reports of underwriters, based on available figures for the first eleven months of the year, will be close to \$500,000,000.

Suretyship. A reduction of 10 to 20 per cent in the basic rates was announced effective May 1, 1945, on bankers' blanket bonds, and bonds for savings and building and loan associations. Also, as of June 15, 1945, general reductions in the basic rates on brokers' blanket bonds, and primary and commercial and blanket position bonds. This

downward trend in the cost is felt to indicate a far wider use in the future of fidelity insurance as a commodity. Even now, the public is indicating a greater interest in this field, and the lowered cost may be responsible.

Air Insurance. A material increase in the premium totals is undoubtedly the result of the widespread interest in air travel, and the general attractiveness and low cost of air insurance. During 1945, there was a large reduction in valuation charges and premiums on air cargo transportation, mainly because of the good performance records for the previous year.

War Damage Insurance. Early in 1945, the War Damage Corporation announced it had once more extended the war damage policies in force on Feb. 28, 1945, for another year from expiration, free of any premium charge. With the ending of the war, the public was happy to forget about these policies. There was some agitation, however, from a few isolated sources, to have the Government refund all or a portion of the premiums paid for this protection from the very beginning. Although approximately \$220,000,000 in premiums is involved, it is felt that to return the premiums would be far more costly than the acceptance of them, due mainly to the small average size of the policies and the tremendous number.

Casualty Insurance. During 1945, there was a substantial increase in automobile collision rates, and this met with the unqualified approval of both producers and companies alike. In New York State the rate increases ranged from 10 per cent to 35 per cent on trucks, and about 33½ per cent on private passenger cars. As may be surmised, the increase is simply due to the large rise in the number and size of collision claims in general, since the removal of gasoline rationing.

There was serious discussion by companies writing compensation insurance, of the problem resulting from industrial concerns employing handicapped workers. Many employers had the erroneous notion that insurance companies would charge higher rates when such disabled workers were employed. This was contradicted in an address before the American Management Association, last spring, by J. Dewey Dorsett, general manager of the Association of Casualty and Surety Executives. He stated that physical defects are not considered in the formulas for determining the compensation rate, and that such employment is not prohibited in any way by the terms of the workmen's compensation policies.

During the year, the possibility of writing "participating policies" (dividend-paying) was explored by thinking members of the insurance fraternity. This would mean a refund or a dividend based either on the general experience of all insurers in a given classification, or based upon the individual experience of the policyowner. Some executives feel this step is inevitable, but it is considered unlikely that any action will be taken during 1946.

There has been some discussion by top insurance executives of the worth of so-called "Automobile Safety Responsibility Laws." New York State having completed about three years under this equivalent of "compulsory" automobile insurance, there was great interest in a wide-open endorsement of safety responsibility laws given by Clifford J. Fletcher, head of the New York Bureau of Motor Vehicles. Commissioner Fletcher said that since the enactment of this type of law in the State, the percentage of insured automobiles in operation has increased from 30 per cent to 80 per cent. In-

insurance producers will vouch for the fact that in all states where these laws are in operation, the enactment has been a stimulant to production of business. Thirty-five states now have some type of financial responsibility law, many of them having followed the New York law rather faithfully.

In general, 1945 has brought about what appears from within to be a spirit of greater helpfulness. The companies realize that from this point on, growth will depend on the degree of service to the policyowner and the extent to which the organization co-operates with the producer of business. This applies to all divisions of the insurance field, and has been particularly noticeable in the life insurance organizations and the casualty companies.

Naturally, it was to be expected during the war years that the depleted forces of the companies throughout the country would not be able to give the same degree of service which was available prior to Pearl Harbor. This difficulty was not confined to the insurance companies but hit every field of commercial endeavor. During war years, the public was forced to "take it"—and did. But, now it is the general feeling that the service angle should once more predominate; and it seemed, at the close of 1945, that the companies are striving to rebuild organizations which will be intelligent, ambitious, conscientious and capable. The postwar educational programs are the first step in the rebuilding process. The desire on the part of the organizations to serve the producers and the public alike, with a view to attracting loyalty from those whose premium-payments support the entire project, seems at this point to be the one factor which should make the insurance field look with hope and determination to the records to be made in 1946.

MERVIN L. LANE.

INTER-AMERICAN AFFAIRS, Office of. The Office of Inter-American Affairs, created by Executive Order August 16, 1940, to coordinate inter-American activities of governmental and private agencies, terminated urgent wartime phases of its programs with the 1945 victories over the Axis powers and Japan, and turned all of its attention to directing its functions into peacetime channels.

By the end of the war for the United States the Office had perfected a hemisphere-wide information service, including press, radio, and motion picture programs and publication of a magazine, *En Guardia*, in Spanish, Portuguese, and French. It was also cooperating with 18 of the other American republics in executing 57 agreements for general hemisphere elevation of basic standards. Of the cooperative field and office programs 18 were for activity in health and sanitation, 8 for food supply and nutrition, 15 for educational activities, and 16 for field missions or advisory functions in railroad rehabilitation, highway construction and maintenance, and port operation.

Five of the cooperative food supply agreements run through 1946, three of these through 1947; five educational and 10 health and sanitation agreements run into or through 1947; six health and sanitation and 10 educational programs run into or through 1948. Functions of the transportation division will run through 1946.

At the inception of the Office, all activities were motivated by two considerations—the emergency aspect of hemisphere defense, and the long-term aspect of economic development of the Western Hemisphere, all based on mutual understanding and cooperation.

After Pearl Harbor, and the war declarations, came the third emergency conference of the Ministers of Foreign Affairs of the American Republics, at Rio de Janeiro. The resulting Rio Charter immediately became the blueprint for all inter-American activity, because it committed the 21 American Republics to a program of vigorous cooperation in military affairs, control of subversive activities and Axis propaganda, health and sanitation, transportation, communications, education, and general economic development.

The 1945 operations of the Office of Inter-American Affairs fell into two broad categories—economic development, with attendant health, sanitation, and food programs, and informational activities. The Rio Charter visualized the well-being of the peoples of this hemisphere as a fundamental goal and this is the chief concern of the basic economy program of the Office.

With its inception in 1940 the Office was responsible for numerous pioneering operations by the U. S. Government. In 1940, before Pearl Harbor, it set up a foreign information service—the first established by a United States government agency. Other pioneering operations included: (1) Publication of the first United States government foreign language magazine *En Guardia*, which was published in Spanish, Portuguese and French, and through 1945 had reached a circulation of 550,000 based on requests alone; (2) Working with the State Department the Office of Inter-American Affairs became the parent of the first cooperative international health and sanitation, food supply, education, and transportation agreements. These action programs, operated jointly by the United States and each of the other republics involved, created a new pattern for execution of international agreements. Throughout the hemisphere the pattern became known as the "servicio system," whereby United States technical missions to the other republics execute agreements for elevation of basic standards in the above mentioned fields under joint authority and financial commitments of the United States and each of the other 18 republics.

Still other firsts in implementation of foreign policy established by the Office were as follows:

- (1) Development of the most complete pictorial record of Central and South America in existence. This photographic library is at the disposal of all newspapers and magazines of the United States and the other American republics.
- (2) First use of the comic book technique, with its mass popularity, to disseminate the United States message to foreign countries.
- (3) Interchange of journalists between the United States and foreign countries.
- (4) Development of the first practical plastic plate for use in mass distribution of text and illustrated material.
- (5) Development of an information service completely processed, translated and ready to print, and supplied directly to newspapers in foreign countries.
- (6) Initiation of direct wire services to short-wave broadcasting stations for transmission of official translations of speeches, statements and other official documents.
- (7) Initiation of a program of cooperation with advertisers both in the United States and Latin America to include special inter-American material in their radio programs.
- (8) Broadcasting of short-wave English-language programs made up in part of domestic networks shows, with the commercials eliminated.
- (9) Installation of the first complete foreign distribution system for documentary and non-theatrical films.
- (10) Creation of the Motion Picture Society for the Americas, first organization of its kind, set up by the motion picture industry to elicit the cooperation of producers and distributors in the government's foreign motion picture program.
- (11) Enlistment of the cooperation of United States citizens resident abroad by organizing so-called Coordination Committees in all capitals of Latin America and in approximately 70 regional centers.

(12) Initiation in 1940 of the first voluntary program among United States business firms to replace agents and sales outlets identified with Axis activities in the other American republics. This program eventually became the Proclaimed List of Certain Blocked Nationals, or the Black List.

In 1940 and early 1941 the Office initiated a program for purchase of urgently needed strategic materials from Latin America. It started a program of industrial trade scholarships under which young men from Latin America were given one to two years training and practical experience in United States factories. In cooperation with the Ministry of Health of Mexico, the Institute of Inter-American Affairs, an agency of the Office, inspired the First Inter-American Conference on Typhus Fever—Mexico City, October 7-13, 1945. Correlating information and experience gained in the wartime development and use of anti-typhus vaccine and DDT in war theaters and several of the American republics, the Conference concluded that typhus could be controlled in the western hemisphere. Through the Institute of Inter-American Affairs and the Pan American Sanitary Bureau the Conference put in motion machinery to aid the other republics in effecting this control.

Supplementing the regular commercial services in their specialized fields, the Office of Inter-American Affairs during 1945 gave wide distribution to news of Inter-American significance, to articles, news pictures, posters, display placards and pamphlets. Pamphlets were published in Spanish, Portuguese, and English on a wide variety of significant hemisphere subjects. An illustrated booklet series on the other American Republics achieved a wide reader interest throughout the United States.

In radio the coverage was equally complete. Besides news broadcasts, for which a special inter-American news service was provided by the Office of Inter-American Affairs on a 24-hour, seven days a week basis, programs included special events, special anniversary programs, interviews with visitors from other countries, and dramatic programs. Many of these were rebroadcast over local stations in the other American Republics. United States networks and stations cooperated with the Office in broadcasting programs which have given United States listeners a better understanding of their southern neighbors. The net result of the program was a continual interchange of information by radio between the people of the United States and the radio audience in the other American Republics.

Motion pictures were widely used to carry the message of hemisphere solidarity to millions throughout the Americas. Distribution was made through regular commercial channels, as well as through private organizations, schools, clubs, and churches. Newsreels in Spanish and Portuguese were released weekly. The program of production and distribution of 16 mm. non-theatrical films, mostly educational and documentary in nature, was greatly furthered during 1945. Subjects included war production, resources and culture of the United States, health programs, agriculture, transportation, industry, and postwar topics. For distribution in the United States, film subjects included materials on the history, customs, resources, and activities of the other republics.

To further the growing mutual understanding among the peoples of the hemisphere, a total to date of 107 leading newspaper publishers, editors and writers from the twenty other American Republics have made extensive tours of the United States at the invitation of the National Press Club

in cooperation with the Office of Inter-American Affairs. These journalists made conducted circle tours of the United States, personally inspecting United States war activities, military camps, cities and agricultural regions, medical centers, libraries and educational institutions. They also had many opportunities to interview governmental, industrial and professional leaders.

In 1944-45, twenty journalists from 14 of the other American Republics were brought to the United States to take courses in advanced journalism at United States universities. In numbers ranging from one to five they attended classes at Harvard, Minnesota, Northwestern, Missouri, Texas, and Rutgers. For the 1945-46 scholastic year fourteen journalists from the other Americas were enrolled.

By Executive Order of August 31, 1945, the informational activities of the Office of Inter-American Affairs were transferred to the Department of State where they became part of the permanent Office of International Information and Cultural Affairs. The transfer included press, radio and motion picture divisions of the Office of Inter-American Affairs.

Other activities of the Office of Inter-American Affairs continued throughout 1945 under the Institute of Inter-American Affairs (health and sanitation, and food supply agreements), the Educational Foundation, and the Transportation Division. The Office of Inter-American Affairs continued direction of fulfillment of these agreements as parent organization to the corporations.

The health and sanitation work, developed jointly with governments of the 18 participating republics, continued during 1945 to include disease-control—particularly malaria—drinking water and sewage disposal projects, and educational programs for training nurses, health and sanitation specialists. Emphasis in this work was directed toward preventive medicine and environmental sanitation as contrasted with isolated curative measures. Institute of Inter-American Affairs personnel records for 1945 show that in carrying out its 800 assorted health and sanitation projects, 250 United States doctors, sanitary engineers and nurses (many of them detailed by the United States Army) worked in the field with 347 doctors, 148 engineers, 126 registered nurses, 2,919 technical and clerical personnel, 1,149 practical nurses and sanitary inspectors, and about 8,000 workmen of the other republics.

Another phase of health and sanitation work receiving continued attention during 1945 was scholarship training of health and sanitation technicians of the other republics in the United States. At the close of the year 395 of these had been given special public health courses and returned to take up program duties in their respective countries, or were in training in the United States. The contemplated figure for the over-all total of trainees to receive this training through the 1948 agreements period is 521.

During 1945 the Food Supply Division of the Institute of Inter-American Affairs serviced cooperative food missions in eight of the other American Republics—Brazil, Costa Rica, Haiti, Honduras, Panama, Paraguay, Peru, Venezuela. The big Brazilian cooperative operation was terminated in August. It reverted to operation by the Brazilian Government after having eased the wartime need for food in the "bulge" area and the Amazon basin. In these areas migratory rubber workers and United States as well as Brazilian armed forces faced hunger because of submarine

disruption of food supply from southern Brazil. The cooperative mission established fruit, vegetable, hog and poultry farms, distributed seed for staple crops, initiated better transportation, marketing, and storage facilities. By the summer of 1945 it was able to announce that food self-sufficiency for the area was within view.

The cooperative food program in Honduras also terminated in August, 1945, leaving that Central American Republic with three modern farm demonstration and experimental stations to serve as groundwork for long range elevation of the national food standards. Food production agreements with the other above mentioned republics extend through December 1946.

In the training phases of its cooperative work in the other republics the Food Division of the Institute of Inter-American Affairs adopted the technique of "learning by doing." Thus 86 young agricultural and nutritional technicians of the participating republics were trained or are in training in actual farm work on United States farms, with county agents, or in farm extension services. Other hundreds have been trained or are in training in their own countries for eventual work in long range programs for raising their national farm standards.

The primary purpose of economic development activities in the Office is to promote commercial relations and to assist in the maintenance of the basic economic stability of the Western Hemisphere. The initiation of the blacklist of Axis business representatives, promotional work to increase the production of strategic materials, assistance in the elimination of Axis interest in hemisphere airlines, are representative past accomplishments.

An important part of the economic development work of the Office was cooperation with United States businessmen in maintaining newspaper, magazine, and radio advertising in the other Americas during the war emergency. The normal advertising income of these communication agencies was necessarily curtailed by industrial conversion to war production in the United States and the curtailment of civilian exports.

During 1943, the Inter-American Educational Foundation was organized by the Office to develop a comprehensive cooperative educational program with the other American Republics. This program was directed at elementary and secondary school levels, teacher training institutions, and the reduction of adult illiteracy. The basis of cooperation is through the ministries of education and existing educational organizations. Reciprocal agreements call for joint contributions of funds, materials, and educational personnel. Development of inter-American teaching materials, construction of curricula, vocational, agricultural, and health education, and the training of teachers in Western Hemisphere languages, are fundamental to the program. The continuing increase in the study of Spanish and Portuguese in the United States during 1945 was equalled by the interest in the other Americas in the study of English.

United States educational activities of the Office included inter-American demonstration centers in the United States, consultant services to teachers and schools, the preparation and distribution of teaching aids, inter-American institutes and lecture series on inter-American affairs in colleges and universities, a national discussion contest on inter-American topics, inter-American workshops in summer schools and development of inter-American materials to supplement textbooks. This work was terminated in 1945.

Closely related to educational work was the coordination of activities carried on by various inter-American groups and organizations in the United States. The major function of this program was to encourage the active participation of community groups and organizations in affairs of inter-American import and significance, and to make available to such groups and to interested individuals informational materials—pamphlets, motion pictures, graphic materials, and exhibits.

The Office has furnished the services of United States transportation specialists to advise other American Republics on maintenance and operational methods. This work has been carried on in collaboration with other U. S. Government agencies. The most extensive program undertaken by the Department has been the sending of a United States Railway Mission to Mexico to assist in the rehabilitation of certain key lines of the National Railways of Mexico. Other railway missions have been sent to Bolivia, Ecuador and Colombia to counsel and advise on railway matters. Highway transportation advice also has been given by specialists to Mexico, Central America, Peru, Colombia, Ecuador, Venezuela and Paraguay. Advice on aviation matters and assistance in procuring aviation equipment has been given other American Republics by aviation specialists. During 1945 a consultant in Port Management conferred with seaport officials and inspected seaports in Mexico, Colombia, Venezuela, Peru and Brazil with the view of relieving port congestion with the resumption of peacetime trade. The visit to the United States of a number of highway and railway officials from the other Americas was sponsored by the Office during 1945 in collaboration with other governmental agencies and trade associations. Technical help was also given on matters relating to economic development and advertising.

WALLACE K. HARRISON.

INTER-AMERICAN DEFENSE BOARD. An autonomous, permanent organization under the auspices of the Pan American Union (q.v.) established in accordance with Resolution 39 of the Meeting of Foreign Ministers of Rio de Janeiro in January, 1942. It is composed of military, naval, and aviation technical delegates appointed by each of the governments of the 21 American Republics to study and to recommend to their governments the measures necessary for the defense of the western hemisphere. Maj. Gen. Edmund W. Hill is Coordinator; Col. L. S. Hitchcock is Secretary General.

INTERIOR, U.S. Department of. A Department of the U.S. Government, created in 1849 and charged with the responsibility for advancing the domestic interests of the people of the United States. In 1945 it consisted of the following principal branches (qq.v.):

- General Land Office
- Bureau of Reclamation
- Geological Survey
- Grazing Service
- Bureau of Mines
- Office of Indian Affairs
- National Park Service (see NATIONAL PARKS)
- Fish and Wildlife Service
- Office of Fishery Coordination
- Petroleum Conservation Division
- Solid Fuels Administration for War
- Coal Mines Administration
- War Relocation Authority
- Division of Power
- Division of Territories and Island Possessions
- Puerto Rico Reconstruction Administration
- Office of Land Utilization
- Office of the Solicitor
- Office of the Chief Clerk

Division of Information
 U.S. Board on Geographical Names
 Budget and Administrative Management Division
 Bonneville Power Administration
 Southwestern Power Administration
 Division of Personnel Supervision and Management

Secretary of the Interior in 1945: Harold L. Ickes; Under Secretary, Abe Fortas.

INTERNAL REVENUE, Bureau of. A division of the U.S. Department of the Treasury, created in 1862, which supervises the determination, assessment, and collection of all internal revenue taxes and enforces the internal revenue laws. In addition it is charged with the stabilization of all salaries in excess of \$5,000 as well as salaries under \$5,000 of executive, administrative, and professional employees not represented by a recognized labor organization. Major divisions are the Income Tax Unit, the Alcohol Tax Unit, the Miscellaneous Tax Unit, the Accounts and Collections Unit, and the Field Service. Commissioner: Joseph D. Nunan, Jr.

INTERNATIONAL COMMISSIONS. The following Commissions were related organizations of the U.S. Department of State in 1945.

International Boundary Commission—United States, Alaska, and Canada, created under treaties of 1906, 1908, and 1925 to define, mark, and maintain the boundary between the United States and Canada and between Alaska and Canada.

International Boundary Commission—United States and Mexico, organized under the treaty of 1889.

International Fisheries Commission—United States and Canada, established in 1923, which investigated and now regulates the halibut fishery.

International Joint Commission—United States and Canada, created in 1909 with jurisdiction over the boundary waters between the United States and Canada. See also **ANGLO-AMERICAN CARIBBEAN COMMISSION.**

INTERNATIONAL COURT OF JUSTICE. At the conference which met in San Francisco from April 25 to June 26 to draw up a charter for the United Nations, it was decided to establish an International Court of Justice. The new Court is intended to become the principal judicial organ of the United Nations Organization. It is expected therefore to supplant the Permanent Court of International Justice and will be established at the Hague, in the Netherlands.

The Permanent Court of International Justice was founded after the First World War. Article XIV of the Covenant of the League of Nations made provision for it. Its Statute was agreed upon in 1920 and the Court was established with headquarters at the Hague, where for eighteen years, from January 1922 to its last sitting in February 1940, it was in continuous and effective existence. At one time or another fifty-one states signed one or more of the many treaties which gave the Court jurisdiction. During its forty-eight sessions, the Court heard sixty-five cases. Some of these cases were withdrawn before final settlement, and two were still pending in 1945. In all, it rendered thirty-two judgments and twenty-seven advisory opinions, and issued more than two-hundred orders of one sort or another. Its authority was never seriously questioned and no government ever refused to comply with a decision which the Court had made.

The German armies invaded the Netherlands in May 1940, and the Court could not go on. The president and registrar moved to Switzerland; the

judges remained on call. Since 1940, one judge has died, and three have withdrawn, but the remaining eleven judges legally constitute the Court. It will continue this suspended life until the states that originally set it up decide officially to bring it to an end.

Preparations for a new world organization were begun before the Second World War ended, and it was evident from the beginning of discussions about the future that a world court of some kind would be an important part of whatever system of international order was established. Cordell Hull, American Secretary of State, said on July 23, 1942, "The settlement of disputes by peaceful means, and indeed all processes of international co-operation, presuppose respect for law and obligations. It is plain that one of the institutions which must be established and be given vitality is an international court of justice." Six days later, the British Secretary of State for Foreign Affairs observed, "His Majesty's Government are entirely in favor of the establishment, or re-establishment, after the war, of an international court of justice." In September 1943, Mr. Hull further remarked that "disputes of a legal character which present a threat to the peace of the world should be adjudicated by an international court of justice whose decisions would be based upon application of principles of law." And he said that attention was being given to "the extent to which the existing court of international justice may or may not need to be remodelled."

The proposals made by the preparatory conference on world organization, which met at Dumbarton Oaks in August and September 1944, called for the creation of an international court of justice that would be the judicial organ of the new world organization. The Dumbarton Oaks plan was for the new court's statute, or constitution, to be made an integral part of the new Charter, and for all members of the United Nations Organization to be members of the court as well. Whether the Permanent Court of International Justice was to be remodelled and continued in existence, or an entirely new court established, was a question left to the future.

On March 24, 1945, the United States issued on behalf of itself and the governments of Great Britain, Russia, China, and France an invitation to the United Nations to be represented on a Committee of Jurists which would make recommendations concerning the nature of a new court. The Committee of Jurists met in Washington, D. C. from April 9 to 20. The American representative, Green H. Hackworth, legal advisor to the State Department, was elected chairman. The jurists agreed upon a draft Statute for the new Court which they recommended to the United Nations Conference shortly to meet in San Francisco. The Court which they proposed was almost a duplicate of the Permanent Court of International Justice, and, in fact, they favored the continuation of the old Court with only a few changes. However, they left the final decision in this respect to the delegates at San Francisco.

In Chapter XIV of the United Nations Charter, which was drawn up at San Francisco between April 25 and June 26, the International Court of Justice is declared to be "the principal judicial organ of the United Nations." This chapter of the Charter states that all members of the United Nations Organization are to be automatically members of the Court, and that they agree to comply with the Court's decisions. In case one party to a dispute refuses to comply, the Charter provides

that the other party may appeal to the Security Council. The Statute of the new Court is appended to the Charter. Except for a few significant changes, the International Court of Justice is like the Permanent Court of International Justice which it is intended to replace.

Preparatory discussions leading to the establishment of the Court considered whether the Permanent Court of International Justice should not be retained and simply revised. A majority of jurists and lawyers favored retention. The American and Canadian Bar Associations jointly proposed this procedure, April 4, 1945, and the Committee of Jurists which met in Washington were of the same opinion. The lawyers and judges felt that it was important to preserve the continuity of personnel, tradition and records of a court which had functioned so well in the past. They felt it was important also to keep intact the many treaties which gave jurisdiction to the Court.

The decision at San Francisco, however, was to create a new body entirely. The reasons for this were mainly political. The old Court was attached, in a way, to the defunct League of Nations, and it was felt that it might lack prestige. Moreover, some of the states represented at San Francisco, notably the United States and the Union of Soviet Socialist Republics were not members of the first World Court, and they could not take part in any move to change an institution to which they did not belong. Moreover, of the fifty-one states who were members of the old Court, three no longer existed, and fifteen others were not represented at San Francisco. The old Court could not be changed legally without the consent of the absent fifteen states. It was best to start over again.

Nevertheless, the Statute of the new Court is substantially the same as that drawn up in 1920 and revised in 1929. The rules have not been changed. Even the numbering of the articles has not been altered. Of the sixty-eight articles of the old Statute, fifty are almost exactly the same, and the only real innovation consists in two new articles providing for the Statute's amendment. Consequently, the new Court will not differ either in composition, jurisdiction, or procedure from the old one. The extent to which the International Court of Justice is considered to be the legal successor of the old Court is indicated by the provision enabling states to transfer automatically to the new Court the jurisdiction conferred upon the old Court by the numerous treaties they had signed.

As was anticipated in the Dumbarton Oaks Agreements, the new Court is to be an integral part of the United Nations Organization. This relationship is unlike that between the old Court and the League of Nations. All states who are members of the United Nations Organization are expected to be members of the new World Court, including the United States and the Union of Soviet Socialist Republics. States which are not members of the United Nations Organization may also become parties to the Statute of the New Court on conditions laid down by the General Assembly. Or they may use the Court for a particular case on conditions laid down by the Security Council.

The new World Court, being a law court, or a place of legal settlement, is restricted in scope and its activities cannot be spectacular. It will operate within the limits of the judicial process, and it will handle only judicial, or juridical disputes. Disputes of international scope which are judicial in nature were defined in the Covenant of the League of Nations and in Article 36 of the new

Court's Statute. They are those which involve: (1) the interpretation of a treaty; (2) any question of international law; (3) the existence of a fact which, if established, would constitute a breach of an international obligation; and (4) the nature or extent of any reparation to be made for a breach of an international obligation. Such disputes do not frequently make the headlines, but they cover the field of legal action, and, so long as states will live within the law, the new Court can supply solutions that will end controversies which may arise.

The principles of the judicial process are generally agreed upon. The Court will offer full opportunity for each party to present its case. Trained, impartial judges will weigh carefully all views presented to them. They will make their decisions on the basis of international law. Such law—according to Article 38 of the Statute—they will find embodied in treaties, customs, generally accepted principles, in judicial decisions, and in the teachings of great jurists. In situations where states go outside the law, other agencies, like the Security Council or the General Assembly, manned by statesmen and diplomats, will be needed to settle disputes.

The Court, however, may not take the initiative or act of its own volition. The parties to the dispute must authorize the Court to act. No individuals, only the governments of sovereign states, may bring in the cases. Many jurists, and the majority of the delegations at San Francisco, do not regard this as an ideal situation. They feel that, since juridical disputes are of a highly specialized nature, it would not be too much to ask of all the states who are members of the United Nations Organization to agree in advance to give the New International Court the right to try all cases of a juridical nature to which they may become a party. Such agreement in advance is somewhat confusingly called giving the Court "compulsory jurisdiction." Largely because of the opposition of the United States delegation, which feared that the Senate would never give its consent to such a proposal, the Court was not given such compulsory jurisdiction in the Charter or in its Statute. Individual states may, however, give the Court such jurisdiction if they so desire, simply by agreeing to an "optional clause," referred to in Article 36 of the Statute. A similar clause, attached to the Statute of the old Court, was used by 45 of the 51 members of that body. This agreement to bring all legal disputes to the Court may be given for a limited number of years. It is possible also for a state to agree to the Court's jurisdiction in advance by including in treaties the provision that the Court shall have jurisdiction in any dispute arising over the treaty. The United States is party to one such treaty now, in the Constitution of the International Labor Organization.

In general, however, the United States, which led in developing the methods of arbitration and judicial settlement during the 19th century, now objects to making any court's jurisdiction automatic. The United States Government insists upon the Senate's right to give its consent in each case as it may arise. One the day on which the Senate ratified the United Nations Charter, Senator Morse of Oregon offered a resolution in the Senate that the United States accept in advance the jurisdiction of the new Court in all future juridical disputes. But the resolution was still in the hands of the Foreign Relations Committee of the Senate at the end of November.

As in the case of the old Court, the new one has

no authority to enforce its decisions. This is not regarded as a serious omission. It is not expected that the Court's judgments will be disregarded. But provision is made in the Charter that, should one party to a dispute refuse to honor the Court's decision, the other party may appeal to the Security Council, which has authority to propose the steps to be taken in such a case. The League Council had a similar role in connection with the old Court. But in all the cases which came before the old Court, the decisions were accepted and only once did the League Council even have to consider any action.

Like the old Court, the new one will consist of fifteen judges. They will ordinarily sit together in full court, but they may establish or create such smaller chambers as they need for special purposes. The judges are not to be regarded as national representatives. They will be eminent jurists, chosen for their ability and high moral character. Nevertheless, no two judges may be from the same state. Judges are to be nominated by national groups of jurists such as those belonging to the Permanent Court of Arbitration at the Hague, and they are to be elected for terms of nine years by a majority vote in both the General Assembly and the Security Council. This parallels the procedure followed for the election of judges to the old Court. One new procedure, however, is that this time the judges' terms will be staggered, and five judges will be elected every three years. The first fifteen judges elected will determine by lot which ones are to serve the full nine years, which six years, and which only three.

The International Court is empowered not only to render judgment in contentious cases brought before it, but it is authorized to give its advice. That is, it may render an "advisory opinion" on any legal question if it is asked to do so by either the General Assembly or the Security Council. This, also, is in keeping with the tradition established by the first World Court whose advisory opinions were considered valuable. Moreover, other agencies in the United Nations Organization may request an opinion of the Court, if they are authorized by the General Assembly to do so.

In the Statute of the first World Court, there was no provision made for any change or amendment. Consequently, changes had to be approved unanimously. The Statute of the new Court is a part of the United Nations Charter, and it is provided that it may be amended in the same way as the Charter, by a two-thirds vote of the General Assembly including all the permanent members of the Security Council.

Such, in brief, are the significant characteristics of the new International Court of Justice. The Senate of the United States ratified the Charter of the United Nations, with the Statute of the International Court of Justice annexed, on July 28. Thus membership of the United States in the new Court is assured. By October, other countries, China, France, Great Britain, and the Union of Soviet Socialist Republics as well, and a majority of the remaining states which had signed the Charter, had formally ratified the Charter and the Statute of the Court. This was a number sufficient to bring the United Nations Organization and the new Court into existence. The Court is expected to be formed and to enter upon its duties in 1946. By the end of 1945, nominations were already being made and two Americans were on the list. Judge Manley B. Hudson has been an American justice on the old Permanent Court and has had a long career of useful participation in the efforts of

modern nations to establish a rule of law for international affairs. His name was offered by the group of men who represent Ethiopia in the Permanent Court of Arbitration. Green H. Hackworth was the nominee of the American group of jurists.

It is expected that chief members of the Court will be chosen from among the jurists of the western nations since they dominate the Security Council in its present form. The framers of the Statute, however, were reaching out toward a possible future international situation in which all civilizations and all cultures, of all races and kinds of men everywhere, could find an ideal of justice which they could understand. To this end, the Statute provides in Chapter One, Article 9, "At every election, the electors shall bear in mind not only that the persons to be elected should individually possess the qualifications required, but also that in the body as a whole the representation of the main forms of civilization and the principal legal systems of the world should be assured."

LYMAN BRYSON.

INTERNATIONAL INFORMATION AND CULTURAL AFFAIRS, Office of (OIC). Government agency which was created Jan. 1, 1946, to continue the overseas information activities of the Office of War Information and of the Office of Inter-American Affairs. The agency, which functions within the Department of State, succeeded an interim international information service. The purpose of the OIC is described in a published letter from Secretary of State Byrnes to President Truman as that of presenting to the world "a full and fair picture of American life and of the aims and policies of the U.S. Government." American libraries of information are to be maintained abroad. Documentary films describing the U.S. are to be scored into foreign languages and sent overseas. A Russian-language magazine intended for distribution in the Soviet Union is to be continued, and short-wave broadcasting will proceed on a reduced scale until action has been taken to dispose of transmitters and frequencies now controlled by the Government. The exchange of students, scholars, and technicians with foreign countries will be continued on a larger scale; operating under the supervision of diplomatic missions, particularly in the case of Latin America; and small staffs will be maintained in 62 countries to direct informational and cultural relations. Mr. Byrnes adds that although the program is "modest compared to war-time standards," it is a "new departure for the United States" for which "a significant expansion in terms of personnel and budget" is planned. William R. Benton, Assistant Secretary of State, is in charge of public affairs for the agency, and the director is William Stone. Chief of the Informational Press and Publications Division is J. Noel Macy. John Ogilvie is head of the International Broadcasting Division.

INTERNATIONAL LABOR ORGANIZATION (ILO). An association of nations which seeks by international action to improve working conditions, raise the standard of living, and further economic and social stability. Its machinery consists of the International Labor Conference, the Governing Body of the International Labor Office, and the International Labor Office. The Conference, which meets at least annually, is composed of four delegates from each Member State: two Government representatives and a representative each from management and labor who are chosen by Governments in agreement with the most representative employers' and workers' organizations in their respective coun-

tries. The principal function of the Conference is to adopt Conventions and Recommendations which define minimum standards of social policy. Sixty-seven Conventions and 74 Recommendations have been adopted by the Conference.

The Governing Body is composed of thirty-two members, sixteen of whom represent Governments, eight of whom represent labor and eight of whom represent management. Eight of the Government seats are non-elective and are held by the states of chief industrial importance. The other eight are filled by Governments elected by the Government delegates to the Conference in an election in which the eight states of chief industrial importance do not participate. The labor and management representatives are elected by the labor and management groups at the Conference.

The International Labor Office acts as the secretariat to the Conference and Governing Body, publishes a series of periodicals, including the monthly *International Labour Review*, which appears in English, French and Spanish, undertakes research on problems of industrial safety, employment, social security, etc., and publishes the results of these studies and reports in several languages.

The working headquarters of the Office were transferred to Montreal in 1940. Three sessions of the International Labor Conference have been held since then. A special session took place in New York in 1941, the 26th regular session was held in Philadelphia in 1944, and the 27th in Paris in October and November, 1945. Regular meetings of the Governing Body were resumed in 1943.

The 27th session of the Conference adopted an Instrument for the Amendment of the Constitution of the Organization which, when ratified by the required number of member states, will free the Organization from its ties with the League of Nations and make possible the establishment of relationships between the Organization and the United Nations. The Conference set up a committee to examine and report on other proposed amendments to the Constitution preparatory to acting upon them at the next session of the Conference. It also adopted a resolution reaffirming the Organization's desire to associate itself with the United Nations.

Other actions of the Conference included the adoption of a Recommendation on Social Policy in Dependent Territories (Supplementary Provisions), a resolution recommending national and international policies designed to maintain high levels of employment during the period of rehabilitation and reconversion, and a resolution recommending policies for the protection of children and young workers. The Conference decided that its 29th regular session would be held in Montreal beginning Sept. 19, 1946. The 28th session will be held earlier in 1946, and will be devoted exclusively to the consideration of international minimum standards in the maritime industry.

During the Paris session of the Conference, a new Governing Body was elected for a three-year term. Governments elected were Australia, Brazil, Chile, Egypt, Mexico, Peru, Poland, and Sweden. The non-elective Government seats are held by the United States, Belgium, Canada, China, France, United Kingdom, India, and the Netherlands.

During 1945 the Governing Body held four sessions. In July the Permanent Committee of the Inter-American Conference on Social Security, with which the Organization works in concert, met in Mexico City. A Preparatory Technical Maritime Meeting to formulate proposals for submission to the 1946 Maritime Session of the Conference was held in November in Copenhagen. In December,

meetings were held in London of the Coal Mining and Inland Transport Committees, two of the seven International Tripartite Industrial Committees which are being set up as part of the Organization's structure by decision of the 1944 Conference. The Industrial Committees for Building, Civil Engineering, and Public Works; Iron and Steel Production; the Metal Trades; Petroleum Production and Refining; and Textiles will meet in 1946. During the year two sessions of the Correspondence Committee on Accident Prevention were held to prepare a draft model safety code for factories which will be submitted to a forthcoming session of the Conference.

During the year the International Labor Office continued to provide expert assistance to Governments in the drafting and administration of social legislation. Ratifications of International Labor Conventions registered during the year totalled eleven, bringing the total number of registered ratifications to 913.

The Directorate of the International Labor Office is: Acting Director: Edward J. Phelan (Ireland); Asst. Directors: Lindsay Rogers (United States); Jef Rens (Belgium); George A. Johnston (United Kingdom). ILO Branch offices: Washington, London, Paris, New Delhi, Chungking.

CAMPBELL BALLANTYNE.

INTERNATIONAL TRADE, Office of. The Office of International Trade, Department of Commerce, has been directed to develop programs to encourage and facilitate the expansion and balanced growth of international trade; promote stability of international economic relations; cooperate with other nations in solving of trade and exchange problems through international organizations and conferences; assist other nations toward higher economic development as a means of stimulating U.S. and world trade; foster and promote trade interests in exports, imports, and the maintenance of full employment; facilitate U.S. participation in peacetime trade with former enemy and other areas in which normal channels of trade do not exist; and resist obstacles to and restrictions upon international trade. The Office will represent the Department in connection with the proposed International Trade Organization and all other economic, financial and trade agencies and conferences in the international field.

The action of the Secretary of Commerce in establishing the Office merged those functions and personnel of the Foreign Economic Administration which were transferred to the Department of Commerce by Executive Order dated Sept. 27, 1945, with those of the Bureau of Foreign and Domestic Commerce which have been concerned with world trade. Under this action it is planned to continue and strengthen the services the BFDC has provided exporters and importers and to encourage expansion of U.S. trade with the rest of the world.

The new organization will have an Office of World Trade Policy; an Office of World Trade Promotion; an Office of War Areas Trade; and an Office of Foreign Economic Development to carry out its functions.

ARTHUR PAUL.

INTERSTATE COMMERCE COMMISSION (ICC). An independent establishment of the U.S. Government empowered to regulate, in the public interest, common carriers engaged in transportation in interstate commerce. (For details, see *YEAR BOOK* for 1940.) Part IV of the Interstate Commerce Act, approved May 16, 1942, conferred upon the Commission jur-

isdiction over freight forwarders. Many times during the war the Commission exercised emergency powers under which it directed that certain traffic have preference or priority in transportation. Chairman: John L. Rogers.

For studies of interstate trade, see also TRANSPORTATION INVESTIGATION AND RESEARCH.

IRAN (Persia). A kingdom in southwestern Asia. Area, approximately 628,000 square miles. Capital, Tehran.

Government. The reigning king, or Shah, is Mohammed Riza Pahlevi, who succeeded his father, Riza Khan Pahlevi in September, 1941, when the latter was forced to abdicate by concerted Anglo-Soviet action because of his unwillingness to take energetic measures against the Axis and its agents in his country. The Constitution provides for a national assembly, or Majlis, to which the Cabinet is responsible. The country is divided into numerous divisions and subdivisions, the administrators of which are responsible to the central government.

The budget estimates for 1944-45 showed a revenue of 10,325,000,000 rials and an expenditure of 10,324,000,000 rials. These figures include both the ordinary and the extraordinary budgets, the latter of which provides for the Government's various industrial and commercial enterprises. In recent years a number of American financial experts under Mr. Arthur C. Millspaugh have been serving the Persian Government. Mr. Millspaugh and his colleagues have now returned to the United States.

An American police mission under Colonel Norman Schwarzkopf of New Jersey has been reorganizing the country's police forces. The army, navy and air forces have also been undergoing reorganization. Since 1941 considerable areas of Iran's national territory have been occupied by British and Soviet, and more lately by American, troops. However, the country's territorial integrity, sovereignty and political independence were guaranteed by a treaty of alliance signed at Tehran by Great Britain, the U.S.S.R. and Iran on Jan. 29, 1942. This was confirmed by a Declaration made by Mr. Churchill, President Roosevelt and Marshal Stalin at the time of the Tehran Conference, Dec. 1, 1943).

Events, 1945. In January the opening of the Dardanelles and Bosphorus to Allied shipping made it possible to send English and American goods direct to Russian ports, thus obviating the laborious, roundabout route across Iran. The Persian Gulf Command was therefore liquidated (as of June 1) and many of the American troops in Iran were transferred to the China theatre of operations. On June 28 it was announced in Tehran that the British and Americans had returned their sections of the Trans-Iranian Railway to the Persian Government. By November 1 it was expected that only some 2,600 American troops would remain in the country to maintain and guard military installations. In all, the Allies had delivered over five and a half million tons of material to Russia via Iran, and of this 2,831,937 tons had gone over the railway. To provide the latter with adequate rolling stock, the United States had sent 180 locomotives and 5,175 freight cars. Much of this, as well as large numbers of trucks and other items, were sold to the Iranian Government.

The end of Persia's importance as a route to Russia caused the country's economy to pass rather suddenly from a wild inflationary spree into a period of deflation. The economic and social results, especially on the working classes and landless peasants, were soon evident in political agita-

tion. The Leftist Tudeh, or "Masses," Party gained many adherents and began making trouble for the Government. The Party's leaders favored friendly relations with Russia and it was widely believed to be Communist-directed. By mid-April armed clashes were taking place between its adherents and those of the "National Will" Party. The ministry, in office only six months, resigned on April 19. It was followed by one headed by Dr. Hakimi on May 11, who, however, resigned on June 4 after an adverse vote of the Majlis.

Meanwhile in May the Iranian Government asked the three occupying Powers to withdraw their troops now that the war in Europe was over. The United States agreed, but neither Britain nor Russia was willing to move without assurances of parallel action from the other. The Allies were reminded by Tehran that they had formally agreed to evacuate their forces within six months of the end of the war—that is, by March 2, 1946. At the same time, Iranian officials complained that the Russian military authorities in the Soviet-occupied zone in northwest Iran (Azerbaijan) had refused to permit the Iranian police to send troops into that area in order to quell disturbances said to have been provoked by the Tudeh Party. The Soviet press began to take more and more interest in Iranian domestic affairs, offering criticism of the Government and its conservative policies. By the end of September the Tehran Government openly expressed fear of Soviet aggression in the northern provinces and sought the diplomatic assistance of Britain and the United States to stop the Russians. The issue was raised at the Council of Foreign Ministers which met at London in September and early October. Foreign Secretary Bevin revealed on Oct. 10 that, in an exchange of letters between him and Foreign Commissar Molotov, it had been agreed that British and Russian troops would be withdrawn from Iran by March 2, 1946.

However, the Russians still refused to allow the Tehran Government to send police and troops to put down disorders in Azerbaijan and Kurdistan, where an independence movement was under way. On Oct. 22 the ministry resigned, and was replaced by one headed by Hakimi, who had held office briefly in the late spring. Meanwhile reports indicated that the Russians were sending more troops into their zone in northern Iran.

On Nov. 18 Tehran announced that a full-fledged revolt had broken out in Azerbaijan Province and that the insurgents were armed and encouraged by the Soviet authorities. The rebels were said to be marching on Tehran, but government troops sent to help quell them were turned back by Soviet forces at Kazvin. The Iranian Foreign Office again appealed for help from the United States and Britain, and it was plain that a first-class international crisis was brewing at a time when relations among the Big Three were already strained as a result of the miscarriage of the London Conference in October. The British in particular took a serious view inasmuch as their imperial interests would be gravely menaced by a Russian coup in Iran. It was generally taken for granted that Russia's actions indicated an extension to the Middle East of her Eastern European and Balkan policy of supporting "friendly regimes." The defense of the oil fields of the Caucasus and the acquisition of the oil resources of northern Iran, for which a Soviet concession had been refused in 1944, were also important contributing factors. Russia's policy in Iran obviously tied in with her encouragement of Armenian irredentism in the Kars and Ardahan districts of Turkey.

On Nov. 25 a "National Congress of Azerbaijan" demanded the creation of a democratic and autonomous government in the province. On the 26th the State Department in Washington announced that it had proposed, in a note to Moscow, the withdrawal of all Russian, British and American troops from Iran by Jan. 1, 1946. Meanwhile charges and countercharges flew back and forth between Moscow and Tehran. On Dec. 2 the Iranian Governor of Azerbaijan was reported assassinated by the autonomists. The next day the State Department announced that Russia had refused to withdraw from Iran by Jan. 1. The United States nonetheless hastened to recall its few remaining troops there. The British decided to stay. The internal situation in Azerbaijan continued to deteriorate, with rebel forces virtually immobilizing the troops and officials loyal to Tehran. On Dec. 9 a council of five elder statesmen was formed in Tehran to assist Prime Minister Hakimi with advice and counsel during the emergency.

By the middle of December it had become obvious that, if the impasse were to be broken, it would have to be done by the Tripartite Conference of Foreign Ministers then meeting in Moscow. With the aid of the Russians, the rebels in Azerbaijan Province, after obtaining the surrender of the government garrison in Tabriz, proclaimed a "national government" there on Dec. 16. Prime Minister Hakimi promised the Majlis that he would take strong measures to put down the insurrection. All this happened while the problem was being explored at Moscow, where Commissar Molotov sought to tie the question of Iran with that of Java and Greece. Russia was reported to hold that the only basis on which she would discuss Iran was as part of the whole Middle East complex of problems, including Arabia, Palestine, Armenia and the Straits. As a result there was no agreement at Moscow on Iran, and as the year closed evidence was piling up that, far from preparing to evacuate, the Soviet forces were actually expanding their hold in that country.

Characteristics of the People. Estimates of the country's population vary from less than 10,000,000 to over 15,000,000. From a quarter to a third of the inhabitants are still nomads, living largely under tribal organization. Most Persians are Moslems of the Shia sect, except for some 850,000 Sunnis. There are small communities of Parsees, Jews, Armenians, Nestorians, Bahaists and others. Persia has been the melting pot of invading peoples and races from time immemorial, and this is evident from the existence of various minorities within her borders: e.g. Armenians and other Caucasian peoples in the northwest, Kurds in the west, Turks in the northeast, etc.

The educational system of the country was drastically reformed during the modernizing era of Riza Pahlevi. In 1937 there were 4,939 schools, a figure which during recent years has undoubtedly grown considerably. A university has been set up at Tehran offering a wide curriculum of technical and liberal studies. In general, foreign schools have been absorbed into the national educational system or have been abandoned.

The Country and Its Economy. By and large Iran is a barren country abounding in vast deserts and steppes where only a sparse nomadic population can obtain sustenance. Yet much of its soil is fertile and only awaits irrigation. Despite these unfavorable conditions Iran is essentially an agricultural country producing a wide variety of grains, fruits and livestock. One of the factors holding back agricultural progress is the fact that two-

thirds of the land is in large estates. Under this feudal system small landowners constitute only a small minority of those tilling the land. The principal agricultural products are wheat, barley, Indian corn, rice, many varieties of fruit, tea, tobacco, cotton and silk. Cattle, horses, donkeys and camels are also bred extensively. Persia has long been a principal producer of the poppy from which opium is derived.

Industrialization has already begun in a small way with the production of such goods as textiles, carpets, glass and sugar. As a consequence there is arising an industrial proletariat in some of the larger cities.

Many of the mineral deposits have been only partly explored and are largely undeveloped. Oil is by far the most valuable mineral product now exploited in the country and the international competition for its control has kept Iran in intermittent danger of losing her independence for forty years. In southwestern Iran the Anglo-Iranian Oil Company has a large concession on which oil is produced, piped to refineries at Abadan on the Shatt-el-Arab and exported in large quantities. In 1941 Iran ranked fourth among the oil-producing countries of the world with an output of 6,708,000 metric tons. By 1944, under the impetus of war needs, the production of the Anglo-Iranian Oil Company had reached 11,521,555 tons. New refinery capacity, including facilities for producing high-octane aviation gasoline, had also been installed. The company employed 65,000 Iranians and Abadan had become a city of 120,000 inhabitants.

The two principal ports on the Persian Gulf are Khorramshahr and Bandarshapur. The main line of the Trans-Iranian Railway was completed in 1938 from Bandarshapur through Tehran to Bandarshah on the Caspian Sea, a distance of 865 miles. Though this was one of the engineering triumphs of the 20th century, some of it had to be rebuilt before it could be used to capacity for transporting Lend-Lease material to Russia during the recent war. Branch lines have been started towards Tabriz, Meshed and Yezd, but none of them is as yet completed. Southern Iran lies along the routes used by the principal airlines between Europe and India.

ROBERT GALE WOOLBERT.

IRAQ (Iraq). A kingdom occupying the lower and middle parts of the Tigris and Euphrates river basins, frequently referred to as Mesopotamia. Its area is 116,600 square miles. Capital, Baghdad.

Government. The reigning king is Faisal II, who succeeded to the throne after the death of his father, King Chazi, on April 4, 1939. During the King's minority, affairs are in the hands of a Regent, Emir Abdul Illah. The Class A Mandate, under which Iraq had been governed following the First World War, terminated in 1932 when the country achieved its juridical independence and became a member of the League of Nations. Iraq was the first of the mandated areas thus to acquire its freedom as promised in the Covenant of the League of Nations.

The Constitution provides for a limited monarchy and a responsible government. The legislature consists of a Senate of twenty elder statesmen nominated for eight-year terms, and a Lower House comprising 115 elected Deputies. For administrative purposes the country is divided into fourteen liwas. The army has been in process of reorganization since the revolt in which certain elements of it participated in 1941. The police force is under British technical supervision.

Events, 1945. The extent of the war-induced inflation in Iraq was indicated by a statement made on January 31 by the director of the Baghdad Chamber of Commerce, Meer S. Basri. According to Mr. Basri, the circulation of currency in the country had increased from 6,000,000 dinars before the war to 42,000,000 dinars at the end of 1944. During the same years Iraq also built up sterling credits in London believed to amount to some £60,000,000. In June it was learned that preliminary work had started on the construction of a sixteen-inch pipeline from Kirkuk to Haifa to supplement the line already running between those two points. The actual laying of the 620-mile route was scheduled to start in 1946, according to the announcement of the Iraq Petroleum Company. Flow of oil through the completed line was expected to begin in 1948, with an initial annual capacity of 23,000,000 bbl. of crude petroleum. In September it was reported that a new pipeline to Tripoli was also being planned which would greatly increase the capacity of the outlet through Syria.

In the autumn it was learned that Rashid Ali, leader of the 1941 revolt, had managed to escape from Europe to Saudi Arabia. The Iraq Government naturally wished to obtain custody of this traitor, who was under sentence of death, but the ancient Arab custom concerning the right of asylum made it difficult, if not impossible, for Ibn Saud to surrender him. On Oct. 16 Colonel Salahuddin Sabagh was executed in Baghdad—the last of the four military leaders of the 1941 revolt to be apprehended and put to death.

During the latter half of the year the situation in Kurdistan and along the Iraq-Iran frontier gave increasing cause for worry to the Baghdad authorities. The Kurdish rebel, Mulla Mustafa, was finally routed from his stronghold in northeastern Iraq, only to take refuge in Iran, where he was reported to be receiving encouragement from the Soviet authorities. As the year closed, the Iraq Government feared that the Soviet-inspired independence movements already making trouble in Persian Azerbaijan and Turkish Armenia might serve as models for similar uprisings in Iraq.

Iraq continued to pursue a policy of close solidarity with the other Arab countries in regard to such issues as Palestine and Syria, and she was active in the formation of the Arab League (see PAN ARAB AFFAIRS). Baghdad expressed disappointment that neither President Roosevelt nor Prime Minister Churchill had interviewed a representative from Iraq during their brief sojourn in Egypt after the Yalta Conference. During the late spring and summer Prince Abdul Illah, the Regent, visited the United States and Europe. On Aug. 28, while in Paris, he expressed opposition to President Truman's request that Palestine be opened to 100,000 Jewish refugees from Europe. On October 3 the Iraq Foreign Office released a protest which it had sent to Washington backing up the Regent's statement. In this note the United States was reminded that President Truman's suggestion violated Mr. Roosevelt's engagement not to settle the Palestine problem without consulting the Arabs.

Characteristics of the People. The estimated population in 1935 was 3,560,456. Over 3,000,000 of these were Moslems; 101,375 were Christian, including Orthodox, Catholics, Protestants and a few remaining Assyrians; and 90,970 were Jews. The official language spoken by the great majority of the people is Arabic. However, on the northern and eastern frontiers there are Kurdish and other

minorities which jealously preserve their cultural identities.

According to law primary education is free and compulsory, but the law is not enforced everywhere. Recent statistics show 788 elementary schools, 61 private primary schools, 63 intermediate schools, and 16 secondary schools. By far the great majority of these institutions are for boys, though the education of girls has been making marked progress in Iraq during recent years. There is no university, but there are colleges of engineering, medicine, pharmacy, teacher training and law, as well as technical schools of agriculture, nursing, etc.

The Country and Its Economy. Iraq is the land of the Biblical Garden of Eden. It has rich agricultural potentialities which could be realized by extensive irrigation and drainage works. At present about 10 percent of the area of Iraq is cultivated; 20 percent is potentially arable; 8 percent is mountainous; 5 percent consists of flooded areas, swamps and lakes; while 66 percent is desert or steppe country. In the north wheat and barley are important crops and sheep-herding is extensive. In the lower delta region some 80 percent of the world's total output of dates is grown.

The country's most valuable product is petroleum, which is produced at several places in northern Iraq. The principal oil field is at Kirkuk, which is connected by pipelines with the Mediterranean ports of Tripoli and Haifa. In 1942 oil production totaled 16,500,000 bbl. The Iraq Petroleum Company, which exploits the Kirkuk field, is controlled by an international group in which British, American and French interests have been represented.

In 1939 imports were valued at 8,156,179 dinars, and exports (exclusive of oil) at 3,759,401 dinars. Basrah, on the Shatt-el-Arab, is the country's principal port. At the beginning of the recent war the standard gage railway which had long been projected to connect Baghdad with Syria and Turkey—the old Berlin-to-Baghdad line—was finally completed. There is also a metre-gauge line from Basrah to Baghdad, and thence to Kirkuk and Khanakin. Highway communication with Iran is maintained from the latter point. Altogether there are nearly 1,000 miles of railway in the country. There are also over 1,200 miles of good highway, including the routes from Baghdad to Damascus and from Baghdad toward Trans-Jordan and Palestine.

Iraq lies athwart the principal air lines running from Europe to India and the Far East. Before the war intercontinental services via Iraq were supplied by the British, French and Dutch. At present American air lines are preparing to enter this field.

ROBERT GALE WOOLBERT.

IRELAND, Northern. An area, largely co-extensive with the region of Ulster, in the north of Ireland; consisting of 6 counties and two parliamentary boroughs, closely united with Great Britain under the title of United Kingdom. Area, 5,237 square miles. Capital, Belfast.

Government. Although Northern Ireland is an integral part of the United Kingdom and is represented by 13 members in the British House of Commons, the country exercises a degree of local autonomy through a Parliament of its own and a Cabinet responsible thereto. The Senate of this Parliament has 24 elected and two ex-officio members and the House of Commons has 52 members, all elected. The composition of the House of Commons in 1945, following the general election of

July 10, was as follows: 33 Unionists; 10 Nationalists; 2 Independent Unionists; 2 Labor; 1 Commonwealth Labor; 1 Socialist Republican; 1 Independent Labor; and 2 Independents.

The chief permanent officer is the Governor, Vice-Admiral the Earl of Granville, who succeeded the Duke of Abercorn on Sept. 6, 1945. Head of the Cabinet is Prime Minister Sir Basil Brooke, elected May 6, 1943, and reelected July 10, 1945.

Events, 1945. Polling for a general election in Northern Ireland took place on June 14 and the votes were counted on July 9 and 10. The dominant Unionist Party plainly stood in no danger of losing the election, but their forces were heartened by a characteristic telegram from Prime Minister Winston Churchill of Great Britain in June, saying that at every turn in the "hard and darksome road to victory . . . the loyalty and courage of Ulster have gleamed before the eyes of men." The Unionists concentrated upon maintaining the constitutional position of Northern Ireland, which was not seriously in question.

Against the Unionist victory were set four losses: two seats to Nationalists and two (in the industrial city of Belfast) to Socialists. Against this they had only one gain. The State opening of the sixth Parliament of Northern Ireland was held on July 20, with the Governor, the Duke of Abercorn, reading the king's speech.

The Duke of Abercorn's resignation as Governor was announced in London on July 2 by the Home Office, together with the appointment of his successor, Vice-Admiral the Earl of Granville. The Duke of Abercorn was Governor of Northern Ireland from the time the office was created in 1922, and it fell to him to initiate all the forms and usages of the new office.

The King and Queen, accompanied by Princess Elizabeth, visited Ulster on July 18 and 19. General Dwight D. Eisenhower visited Belfast in late August. He received a surprise ovation at the Belfast Opera House on August 23 and was given the freedom of the city on August 24.

A critical answer to Eire's Prime Minister de Valera's speech of Nov. 6 was made by Prime Minister Sir Basil Brooke on the following day. The statement said in part: "To expect Ulster to become part of the state in which loyalty to the Crown is blatantly repudiated is an outrage on reason and common sense." It said further that although Ulster desired to live on good terms with Eire, it would not be intimidated; and de Valera and other advocates of force were simply blocks to amity.

The budget, presented on Nov. 21 by Minister of Finance J. Maynard Sinclair, showed total revenue at £56,500,000, an imperial contribution of £34,500,000, and expenditure of £21,785,000, with increasing outlays for the social services.

The People. The estimated population of Northern Ireland in 1940 was 1,300,000. Vital statistics for 1943 showed a birth rate of 24.8 per thousand, a death rate of 11.5, and an infant mortality rate of 79 per thousand live births. The latest available figures show religious affiliations as follows: 33 per cent Roman Catholic, 31 per cent Presbyterian, 27 per cent Episcopalian, and the remaining 9 per cent in smaller denominations or unclassified. Educational facilities include elementary, secondary and technical schools with the Queen's University at Belfast at the apex of the structure.

The Economy. Agriculture and manufacturing are the chief occupations. Flax is extensively raised

and livestock production is large in proportion to the size of the country. Agricultural and dairy products find their chief external market in Great Britain. Linen, with 70,000 employees, is one of the chief manufacturing industries, but shipbuilding and repairing machinery in various forms and cotton textiles are also important. Mining, quarrying and fishing occupy appreciable numbers of the population.

ALZADA COMSTOCK.

IRON AND STEEL. The iron and steel industry reverted from khaki to mufti with little change in its basic production processes, but in both war and peace proved so vital that capacity proved insufficient to meet demand in 1945.

Continual shifts in the type of finished products which the industry was asked to produce kept production schedules off balance throughout the year. Concentrated demand first for one type of finished steel, then another, created avalanches which buried specific sections of the industry until swept away by production or cancellation. Weary from meeting the war demands of the United States and its allies for six years, the steel makers turned to the needs of peace to find many new plants built to supply war needs were unsuited for the demands of a peacetime economy hungry for metal products.

Actual production of steel ingots, the unfinished product by which industry activity is gaged, dropped to 79,745,581 tons in 1945 from 89,642,000 tons in 1944. This production, far ahead of any peacetime year, was shaped into 55,691,962 tons of finished steel products, compared with more than 63,500,000 tons in 1944. (The difference between the two figures represents scrap produced in the forming operations which was fed back into the steel making furnaces.)

The changing character of the demand for steel is indicated by the different products the industry was directed to produce during the first nine months of the year by the War Production Board and the materials demanded by its civilian customers the balance of the year. As the Army fought its way through Belgium and Germany in the spring, an artillery shell program larger than any previously during the war overloaded production facilities for special quality "hot-topped" steel to be rolled into round cornered square billets, approximately 4 in. by 4 in. and 6 in. by 6 in. in size. This type of demand came into direct conflict with production of rails, structural shapes, and, in some instances, plates. Yet during the same period demand for plates for shipbuilding was maintained near the high level reached earlier in the war. Armor plate and structural steel for demountable Bailey bridges placed a further load on the facilities for producing heavy products. As victory drew near in Europe, shipbuilding requirements were cut, and the shell program was trimmed although the latter dominated the mills until past mid-year. While the shell steel and plate demand was still the dominating production factor, a mounting clamor for light sheet products provided a gradual shift in emphasis. Oil drums for transporting fuel to the fighting fronts, steel landing mats, steel containers for packing shells (paper had proved unsuitable in the Pacific), and finally steel shelters called for far more tonnage of lighter gage products than the mills could roll. This demand, and an increasing need of steel plate for making bombs, gave the industry no chance to catch its breath with the end of the European war and prevented civilian industries from receiving

much more steel than previously until the last gun was fired at Japan. Production momentum hindered bringing operations to a quick halt on these types of steel with the end of the war and it was not until the last three months of the year that the rolls picked up speed on the pent-up needs of civilian economy.

Then manufacturers filed their needs so rapidly that soon a queue formed to wait for deliveries through the middle of 1946, beyond which few mills would book advance orders. Although there was a waiting list for nearly all types of steel except alloys, again demand was particularly concentrated for a few types, notably light gage sheets and strip needed by the automobile and appliance industries and many others. The impact of peacetime demand is shown by the fact that orders received for steel advanced about 15 per cent over 1944, although production declined.

One phenomenon of the latter stages of the war and the return to peace was the reduction in alloy steel production both in tonnage and in proportion to total steel produced. Alloy steel production hit a peak in 1943 when over 13,000,000 tons were made amounting to nearly 15 per cent of all steel produced that year. In 1945, only about 8,500,000 tons of alloy steel was made, amounting to about 10.7 per cent of total production. The trend is still downward, leading experts to believe alloy demand may be about 8 per cent of the total in 1946, which is about 2 per cent more than prewar. When steel capacity was hurriedly expanded early in the war, great emphasis was placed upon the construction of electric furnaces used principally in making alloy steel. As alloy demand slackened, steel makers turned back to the open hearth furnace, a cheaper method, so that in 1945 the open hearths supplied slightly more than 67 per cent of alloy steel, far more than had been envisioned. In the third quarter of 1945 electric steel making capacity operated at only 51 per cent as against 76 per cent in the third quarter of 1944 and 86 per cent in the first quarter of 1944.

Aside from the changing demand which left idle many electric furnaces and other specialized production units constructed for the war, such as far western capacity built for the shipbuilding industry, the reasons why the industry failed to produce up to its full capacity of 95,500,000 tons a year lay in unofficial retirement of obsolescent high cost facilities, manpower shortages, spasmodic stops and starts to meet production shifts, cold weather early and late in the year, and lack of coal during two coal strikes. Official abandonment of

high cost facilities reduced rated capacity to 91,890,560 tons as of Jan. 1, 1946.

Despite vast strides in the plastics and light metals industries, steel held its place as the major manufacturing material because of its low price in relation to the functions it was able to perform and because of technical advances meeting specialized needs. High strength, low alloy steels appeared certain to be in increased demand particularly in the transportation field. Stainless steel likewise seemed bidding for new popularity as reflected in plants for additional production facilities. Refinement in methods of casting small parts, weighing one quarter pound or less, indicated that many pieces which formerly were machined from bar stock henceforth could be cast directly to tolerances as close as 0.0005 in.

In addition to the expansion in alloy steel production facilities for special war needs, the United States had, during the war, achieved a 100 per cent increase in plate production capacity to more than 12,000,000 tons annually and had spent \$61,000,000 on new facilities in the West, accounting for 19.4 per cent of the total of \$1,862,000,000 spent on steel projects in the entire United States. At the end of the year, the Government had not delved deep into the problem of disposing of surplus facilities which it had constructed. Bids for disposal of the \$200,000,000 Geneva, Utah, steel plant were set for Apr. 1, 1946, and action on this plant disposal was indicated to be a bellwether of policy on sale of the other plants.

Shortage of manpower hampered the iron and steel industry throughout the year, with little improvement even after the end of the Japanese war. Production of the gray iron and malleable foundries was at 50 to 60 per cent of its estimated annual capacity of 19,000,000 tons a year because of a shortage of employees, resulting in a shortage of castings which was a bottleneck both to war production and reconversion. Work stoppages in the coal mines caused far more loss of steel production than temporary local slowdowns and unauthorized strikes in the nation's steel mills. Blast furnaces were banked and open hearths shut down

UNITED STATES STEEL OUTPUT
(Thousands of Net Tons)

Year	Alloy	Pct of Total	Carbon	Pct of Total	Total
1939	3,212	6.1	49,587	93.9	52,799
1940	4,906	7.4	62,017	92.6	66,923
1941	8,206	10.0	74,633	90.0	82,839
1942	11,526	13.4	74,500	86.6	86,026
1943	13,150	14.9	75,235	85.1	88,385
1944	10,633	11.9	79,009	88.1	89,642
1945	8,543	10.7	71,557	89.3	80,000

U.S. STEEL DISTRIBUTION BY CONSUMING INDUSTRIES
(In Net Tons and Pct of Total)

Source: *The Iron Age*

	1939		1944		1945	
	Tons	Pct.	Tons	Pct.	Tons	Pct.
Agriculture	1,420,697	3.6	1,950,162	3.1	2,094,570	3.8
Aircraft	..	..	4,761,538	7.4	5,520,919	9.0
Automotive	5,906,358	15.1	..	..	..	..
Construction	6,100,380	15.6	6,240,197	9.8	8,353,027	15.0
Containers	2,978,463	7.6	3,878,161	6.1	3,959,353	7.1
Furniture, furnishings	1,182,235	3.0	..	..	..	..
Machinery, tools	1,460,000	3.7	3,270,156	5.1	4,739,454	8.5
Oil, gas, water, mining	1,841,599	4.7	2,464,068	3.9	2,670,079	4.8
Pressing, forming, stamping	659,864	1.7	1,934,547	3.0	3,359,394	6.0
Railroads	3,250,022	8.3	6,134,249	9.6	5,267,778	9.6
Shipbuilding	517,771	1.3	12,011,301	18.8	3,374,408	6.1
Exports	2,817,482	7.2	5,107,690	8.0	3,683,749	6.6
All other	10,932,676	28.2	16,094,055	25.2	12,669,256	22.7
Total	39,067,553	100.0	63,846,124	100.0	55,691,962	100.0

* Negligible, or not available and included in All Other. * Included in Pressing, Forming, Stamping. * Included partly under Furniture and Furnishings and partly under All Other.

in Pittsburgh and Birmingham the first week in April due to a temporary unofficial coal strike, but the most serious coal curtailment came during the October strike which also prevented building up winter coal inventories.

Steel prices underwent adjustment on Jan. 11 and May 23 through Office of Price Administration action. Prices of most common carbon steel finished products except hot and cold rolled sheets and strip, tin plate, reinforcing bars, structurals, and sheet piling were advanced on either or both dates, and some semi-finished product prices were included in the May rise.

Pig iron prices were raised \$1.00 per gross ton on Feb. 14 and 75 cents additional on Oct. 22. *The Iron Age* magazine composite finished steel price, representing a weighted average in relation to quantities of individual products shipped, stood at 2.44076 cents per pound at the end of 1945, compared to 2.21189 cents per pound a year previous.

German steel production facilities suffered comparatively little damage during the war, it was revealed. At the end of the war Germany had a capacity of almost 36,000,000 net tons of ingots yearly and was producing at the rate of 27,000,000 net tons yearly. Reports were incomplete on damage to the Japanese industry, but it was indicated to be considerably more severe. Estimated Canadian production for the year was approximately 2,735,000 net tons of ingots compared to 2,878,407 net tons in 1944. Present capacity potentially makes Canada independent of the United States for its steel supply, whereas in prewar days imports were necessary.

The vast appetite of the iron and steel industry for raw materials during wartime has demonstrated that as much iron ore, coke, and scrap was consumed in the three years and five months between the attack on Pearl Harbor and the defeat of Germany as in the eight years from 1932 through 1939. United States production of iron ore during 1945 totalled 88,754,000 gross tons compared to 94,117,705 gross tons, the revised total for 1944. Minnesota, largest producing state, supplied 70 per cent of the total and, together with Michigan and Wisconsin, 85 per cent. Iron ore prices were raised 10 cents per gross ton on Mesabi range ores and 20 cents per gross ton on Old Range ores by OPA action. A potential scrap shortage more serious than any during the war was faced by the industry at the end of the year as flow of material from war plants ceased and production of scrap from reconversion activities had not yet started. U.S. Bureau of Mines records indicated that about 50,000,000 tons of scrap iron and steel was consumed during the year, slightly more than half of it produced in the steel plants themselves and the balance purchased. Production of pig iron from which, with the addition of scrap, steel is refined and which forms the basis of iron foundry operations, totalled (including ferro-alloys made in the blast furnace), about 53,500,000 tons (1944, revised, 61,939,474 net tons).

CHARLES T. POST.

ITALIAN LITERATURE. In 1943 the Italian literature section of this publication came to a regrettable but inevitable interruption. The task was relinquished with nostalgia and not without apprehension that for Italy dolorous days lay ahead, and its soil, so prolific in art, poetry, and incantation, was to undergo the ravage and desolation of war. These war years yielded scant, if any literary production, and the department of History, perforce, monopo-

lized the whole Italian panorama. In fading out of the Italian horizon, Italian literature and scholarship, by some miraculous and fortuitous circumstance found a foster home in America. And Italy, will surely feel gratitude to America, the gracious torch bearer of Italian letters in this war interim. For here not only many of our University Presses but numerous publishing houses magnanimously and courageously (Italy was not on our side for part of the war!) took over the duties of bringing to light many a monograph on special research and many a volume on varied and multiple pursuits: fiction, poetry, biography, philosophy, politics, and, yes, even a cook book! Among the reviews bearing Italian studies, the bulletins of the "Italcica" emerged as of utmost importance. The "Italcica," be it recalled, was founded in 1924 and is the official quarterly bulletin of the American Association of Teachers of Italian. Laudable and conscientious in its work, it was published uninterruptedly, and among its more recent articles, these could be singled out at random: *Leopardi and Impressionism* (March, 1945), *The Living Dante* (June, 1945), *On The Meaning in The Decameron*, and *Le Distrazioni di Ludovico Ariosto* (both, September, 1945).

Two novels published in America on Italian American themes were Jerre Mangioni's *Mount Allegro* (Houghton Mifflin Co., Boston). The scenes in *Mount Allegro* are projected in a "Little Italy" section of Rochester settled by Italians originally emanating from the Province of Girgenti. "They brought with them all their peasant superstitions, their dread of the evil eye, of witches, of direct divine punishment for sin. They brought heroic appetites, a fondness for good wine and for music and endless rounds of family parties. . . . You see the folk of Mount Allegro live their rich lives in America, but not of it. You see them age and die. Finally you see their children emerge as *Americani*, more fiercely loyal to the United States than the children sprung from Mayflower stock, and you understand why there are so many Italian names in current battle casualty lists." In Helen La Penta's *Piccola* (Harper & Brothers, New York) the heroine is a little girl first brought up in Italy then in America. It is a simple and touching narration about a child's strange and vivid world with episodes ending with her adolescence on a New England and New York background. "She is remarkable only in the fact that she grew up under unusual circumstances and was unwilling, or unable, to let any single environment mold her into a conventional pattern of behavior." Though not devoid of a sense of humor, the novel reached but a small public inasmuch as its principal appeal lay in the field of child psychology. Ignazio Silone who made an enviable reputation as an anti-fascist in his novel *Bread and Wine* continued his work in exile publishing this time *The Seed Beneath the Snow* (Harper & Brothers, New York). Pietro, the same hero of *Bread and Wine* is the political renegade in Fascist Italy. Of course this type of novel is already dated and might easily have disintegrated into another mouthpiece for propaganda had it not possessed other values, aptly pointed out by a recent critic in that *The Seed Beneath the Snow* "has indestructible meaning and grandeur, because Silone dramatizes, chiefly within one village (in the Abruzzi), the conflict of two irreconcilable worlds. One is the world of Caesar: petty officials, petty sycophants, sentimental housewives, craven husbands, tame-card priests . . . in short, the dull, timid, heartless ambitious mass of whom, in Silone's opinion, life



A MOTHER IN EL SALVADOR COMPARES HER BABY WITH THE IDEAL

At the Sanitary Clinic in Santa Techa where "good neighbor" health work was operating. (O.I.A.A.)



THE COOPERATIVE HEALTH SERVICE DISPENSARY CRUISER

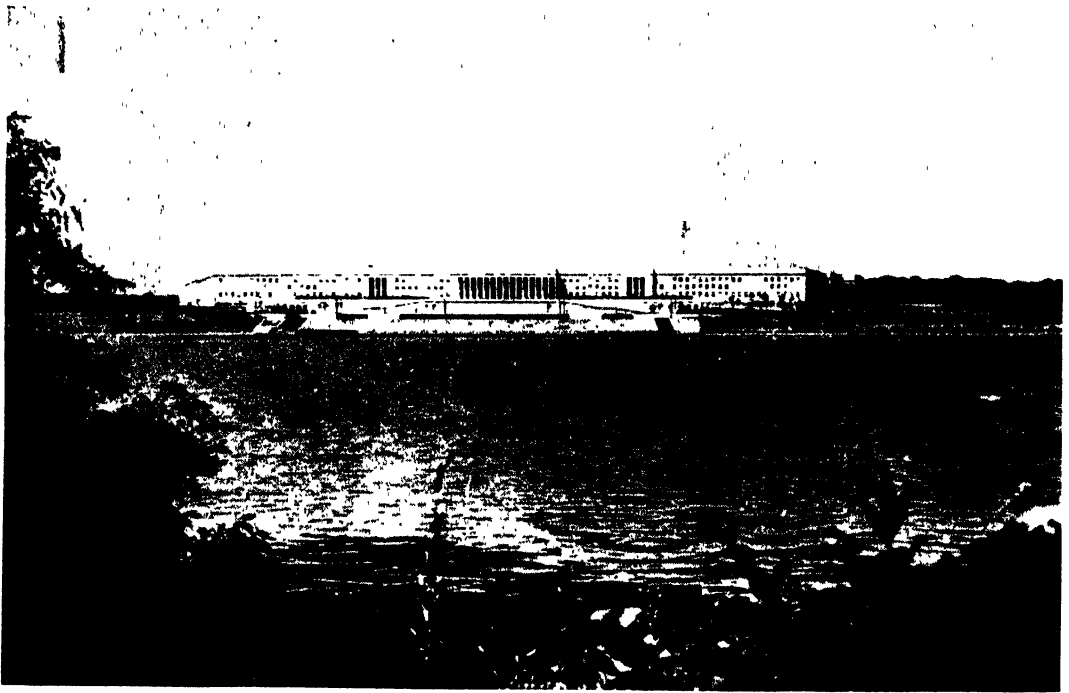
The President Roosevelt pulls into dock at an Amazon village to service citizens afflicted with malaria and other diseases. Small fleets are maintained in Amazon waters, in Bolivia, Peru, and elsewhere in Brazil.



SPECIAL PUBLIC HEALTH SERVICE SPRAYS FOR DEADLY MOSQUITOES NEAR BELEM, BRAZIL

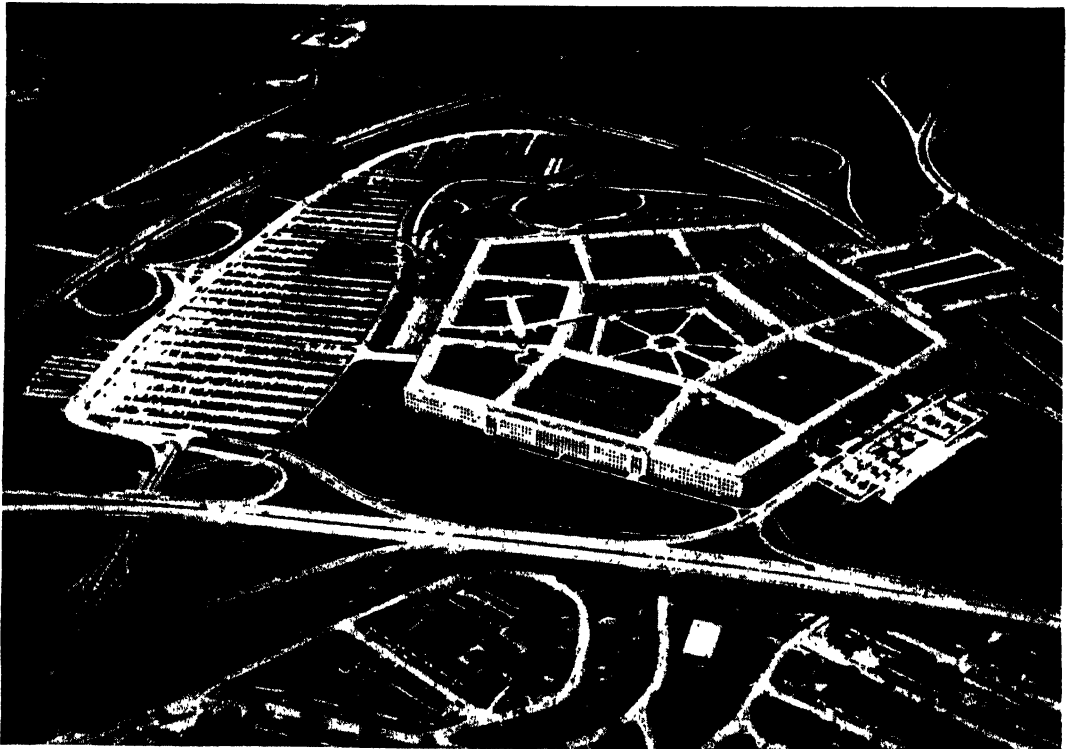


EVEN A TRAILER HOME—PLUS TASTE—CAN BE CHARMING DURING A HOUSING SHORTAGE
Lewis Park, Norfolk, Va., 1943. (See *Public War Housing*.) (FPHA)



THE PENTAGON HEADQUARTERS OF THE ARMY, FROM ACROSS THE LAGOON

Major General Paul, chief of Army Personnel, told a Senate committee he did not know just how many officers were in the Pentagon, for he suspected some officers "might have been lost there for several years"



AIR VIEW OF THE PENTAGON BUILDING, WASHINGTON, D. C.

with the plane of the Secretary of the Navy flying over it. (Press Assn., Inc.)

is chiefly made. The other is the world of God: the only world in which fearlessness and friendship are possible, and almost nothing else." One can look eagerly forward to a continuation of Silone's creation within a new Italy and an Italy at peace. W. P. Crozier, editor of *The Manchester Guardian*, published a second very entertaining and distinguished novel, *The Fates Are Laughing* (Harcourt, Brace and Co., New York) portraying the Rome of Tiberius and Caligula. *The Letters of Pontius Pilate*, published some twenty years ago, established the author as an adept master in projecting history on an imaginative canvas to bring vividly to life the ways and habits of the ancient Romans. *The Fates Are Laughing* appeared post-humously for Mr. Crozier died just after the proof-reading. With but few exceptions the pseudo-historical novels of this type, particularly those dealing with ancient Rome, have been "either ponderous literary documents or highly colored romances." This novel which W. P. Crozier did not live to see published, escaped the pitfalls of boredom and exaggeration, and offered to the contrary a portrayal of life among the ancient Romans with "delicious ironic humor and incomparable ease."

Many and varied were the biographies on the great Italian personalities, and a few can be recorded here without setting off any in order of importance. First at hand may be mentioned Count Carlo Boeuf's Renaissance figure, *Cesare Borgia, The Machiavellian Prince* (Oxford University Press). Time and again Cesare Borgia has been depicted as a sinister and ruthless prince, and the author of the present volume did not set out to prove or disprove the deeds of Borgia, the villain, but simply to picture his personality in a quietly reasoned and objective study. The result draws one into believing that Cesare is not as frightful as history has made him. Count Carlo Boeuf has obviously tried to be very fair in dealing with this enigmatic figure, and to be sure, he has made interesting reading material; but history has long ago "jelled" the character of this famous man and the mere mention of Cesare Borgia will always conjure up cunning and violence. Vernon J. Bourke prepared a comprehensive study of Saint Augustine, *Augustine's Quest of Wisdom* (Bruce Publishing Co., New York). In a "fast-moving narrative" the author has presented "all the Augustinian views on God, man, and the universe." A famous trio, Columbus, Amerigo Vespucci and Marco Polo, among Italy's navigators, travelers, and explorers, received broad as well as detailed study. In *Admiral of the Ocean Sea, A Life of Christopher Columbus* (Little, Brown & Co., Atlantic Monthly Press, Boston) Samuel Eliot Morison, scholar, seaman, historian, examined painstakingly all the records on the famous Genoese, and even put to sea along the courses taken by the Great Admiral in order to elucidate beyond any doubt some of the garbled and obscure historical data attached to this famous personality. This monumental work came out in two editions, one, handsomely assembled with illustrations, maps and drawings, and fully annotated in two volumes, the other in one volume, also with maps and illustrations. Amerigo Vespucci had two biographers. Stefan Zweig (now deceased) sought to clear up much of the vilification of the Florentine after whom America was named in *Amerigo, A Comedy of Errors In History* (The Viking Press, New York). The work was translated and prepared with maps and facsimiles by Andrew St. James. Though Stefan Zweig had a facile and artistic pen, the job of establishing a truer position

in history of our Piloto Mayor was left to Frederick J. Pohl in his succinct and convincing study. *Amerigo Vespucci, Pilot Major* (Columbia University Press, New York). The edition was well prepared with numerous designs, maps and illustrations. Lastly, in the trio, was Henry H. Hart's Marco Polo, *Venetian Adventurer: An Account of the Life and Times and of the Book of Messer Marco Polo* (Stanford University Press, Cal.). The work was hailed as a "full and living recreation of that legendary yet vitally real and important thirteenth century hero." From Chapel Hill, University of North Carolina Press, came a gracious and graceful volume, edited with care and good taste by Hardin Craig, *Machiavelli's The Prince, An Elizabethan Translation*. The translation was taken from a recently discovered manuscript found in London and now forming a part of the Jules Furthman collection (Los Angeles).

Varia. The period saw the passing of Italy's most famous contemporary historian, Guglielmo Ferrero, especially known here for his *Greatness and Decline of the Roman Empire*. Not just an objective historian, Signor Ferrero's interpretation of history was scintillating and full of invective allusions. His ultimate greatness lay in his ability to mold the historic idiom into one of literature. In fact, in recent years, he devoted his energies toward the creation of the historico-fictional novels, *The Third Rome*, *The Two Truths*, and *The Son's Revolt*. And now, at random, could be recorded books of various categories. First, the timely political creed of Italy's foremost philosopher, Benedetto Croce, was published in a translation done by Salvatore J. Castiglione, *Politics and Morals* (Philosophical Library, New York). Vincent Sheean translated four recent essays of Croce, *Germany and Europe, A Spiritual Dissension* (Random House, New York). In this connection could be mentioned a translation of *The Autobiography of Gianbattista Vico*, carefully prepared in a handsome volume by Max Harold Fisch and Thomas Goddard Bergin and published by the Cornell University Press (Ithaca, New York). The charming Roman dialect that the poet Trilussa made so famous throughout the world brightened his poems and fables, were published in part by an enterprising young editor, S. F. Vanni (New York), who already has brought out serious and scholarly works such as Professor Pei's *Italian Grammar and Languages for War and Peace*. *Trilussa's Roman Satirical Poems* have the Italian text on one page and Grant Showerman's translation on the opposite. The two artistic giants, of the Renaissance, Leonardo and Michelangelo, had separate biographies; Leo Lerman gave a full-bodied account of Michelangelo's life in his lengthy and richly illustrated book, *Michelangelo, A Renaissance Profile* (Alfred A. Knopf, New York); and Elizabeth Hubbard Lansing wrote of *Leonardo, Master of the Renaissance*. This volume, with an introduction by Hendrik Willem van Loon, follows the usual pattern of romanticized biographies in trying to recreate the life and mood of the period. The illustrations seem to be quite poor. While speaking of the Renaissance, mention should be made of a new pocket-size edition of Jacob Burckhardt's great work, *Civilization of the Renaissance in Italy* (Oxford University Press, New York). In conclusion, various specialized works might be recorded. *A Literary History of the Italian People* by the distinguished Italianist, Joseph Spencer Kennard, continued to be read in the past few seasons. Count Carlo Sforza dedicated his volume, *The Real Italians*,

(Columbia University Press, New York) to "the Italians and sons of Italians in Canada and the two Americas I dedicate these pages, dictated by an unshaken faith in our future . . ." *Translations from Leopardi* by R. C. Trevelyan was published by the Cambridge University Press, Cambridge. It includes fourteen of the poems in the *Canti* and the *Dialogue Between Torquato Tasso and His Familiar Spirit*. Lastly may be recorded a beautifully prepared volume of Michelangelo's *Rime*, the poems of the great master published by Viau of Buenos Aires.

O. A. BONTEMPO.

ITALY. A kingdom of southern Europe, upon which a Fascist dictatorship was superimposed from Oct. 22, 1922, to July 25, 1943. An armistice was concluded with the Allies during September, 1943. King: Victor Emmanuel III (ascended the throne July 29, 1900) who retired from public life on June 4, 1944, but he did not abdicate. A royal decree of June 5, 1944, nominated Crown Prince Umberto as "Lieutenant-General of the Realm."

Area and Population. Italy had an area of 119,764 square miles (1936). Population (Oct. 31 1943): 45,637,000, compared with (1936 census) 42,993,602 (31,735,027 urban and 11,258,575 rural residents). There were 67,063 emigrants in 1940. Vital statistics (rate per 1,000; based on Jan.-June, 1943): 20.5 live births, 14.2 deaths, 5.6 marriages. The infant mortality rate (deaths under one year per 1,000 live births) was 108 for 1942.

Rome, the capital, had an estimated population of 1,480,253 on Mar. 1, 1943. Other important cities (with estimated populations on Jan. 1, 1939, exclusive of workmen and soldiers in the Dodecanese and in Africa) were: Milan, 1,205,542; Naples, 920,460; Turin, 690,015; Genoa, 654,211; Palermo, 431,666; Florence, 351,055; Bologna, 315,158; Venice, 283,926; Trieste, 258,612; Catania, 251,978; Bari, 210,777; Messina, 202,375; Verona, 166,315; Padua, 150,203; Taranto, 151,150; Leghorn, 134,545; Brescia, 134,340; Ferrara, 122,913; Reggio di Calabria, 121,876; Cagliari, 119,934; La Spezia, 119,067.

Colonial Empire. When Italy entered World War II as an Axis partner of Nazi Germany, it had an overseas empire (including Albania and Libya) of 1,279,589 square miles with an estimated population of about 14,186,400. By the end of 1943, the Italians had lost effective control of the whole of their overseas empire. British and Allied forces occupied Eritrea, Ethiopia, and Italian Somaliland in 1941 and Libya in 1942-43. During 1943 and 1944 Albania and the Italian Aegean Islands as well as the territories annexed from Yugoslavia were occupied by either Allied or German troops. After the unconditional surrender of Germany in September, 1945, all Italian territory occupied by German troops passed into Allied control.

Education and Religion. School enrollment in 1937-38 was: elementary, 5,051,306; secondary (including technical and art), 613,588; higher education (1938-39), 77,429. One out of every five adults is illiterate. According to the census of 1931 there were 41,014,096 Roman Catholics (99.6 percent), 83,618 Protestants, and 47,825 Jews.

Production. About 46.3 percent of the working population was engaged in agriculture and fishing in 1939, 30.4 percent in mining, quarrying, and industry, 8.3 percent in commerce, and 4.6 percent in transportation. The wheat harvest was estimated at 4,180,000 metric tons—the smallest crop since 1920 and roughly two-thirds of the 1944 wheat crop. The output of barley, oats, and rye in

1945 was about two-thirds of the 1944 output. The 1945 corn crop was normal at 230,000 tons. Rice produced in 1945 was estimated at 400,000 tons which was below the normal yield. Dry legumes (beans, peas, and broad beans) suffered heavily. The 1945 olive crop was estimated at 950,000, and the output of grapes, other fruits, and vegetables was good. Other important crops are sugar beets, cotton, linseed, flax, and raw silk.

Mineral and metallurgical products included petroleum, coal, pyrites, sulfur, iron ore, pig iron and ferro-alloys, steel, lead, zinc, bauxite, aluminum, quicksilver, and silver, textiles, rayon and staple fibers, refined sugar, cheese, and macaroni are important industrial products. In 1941 the output of electric current amounted to 21 billion kwh.

Foreign Trade. Publication of official trade statistics was suspended after Italy entered the war. However, unofficial figures indicated that imports in 1940 totaled 12,908,000,000 lire (9,938,000,000 in 1939) and exports 9,244,000,000 lire (8,160,000,000 in 1939). These figures exclude trade with the Italian colonies.

Finance. Budget (1944-45): revenue 12,938,000,000 lire; expenditure 129,071,000,000 lire (ordinary 33,658,000,000 lire, extraordinary 95,413,000,000 lire). War expenditure for 1944-45 (included in the foregoing figures) totaled 32,700,000,000 lire. The minister of reconstruction on Oct. 24, 1945, summarized the financial situation of Italy as including a public debt of about 1,000 billion lire, a current budget deficit of 350 billion lire, and a total currency circulation of 350 billion lire.

Transportation. In 1941-42 there were 14,448 miles of railway lines, and 128,830 miles of roads. Shipping in control of the Italian merchant marine on Sept. 1, 1945, totaled 500,000 gross tons; in addition 300,000 tons of that sunk in Italian ports or along the Italian coast during World War II was considered salvageable. On June 10, 1940, Italian shipping totaled 3,537,000 gross tons, of which 900,000 tons were in enemy and neutral ports.

Government. With the overthrow of the Fascist dictatorship on July 25, 1943, Italy reverted to the status of a constitutional monarchy as established by the Constitution of Mar. 4, 1848 (see the 1943 YEAR BOOK for the principal features of the Fascist regime). That part of Italy under Anglo-American control was temporarily administered by the AMG (Allied Military Government of Occupied Territory) with the assistance of the Royal Government, headed by Crown Prince Umberto after the liberation of Rome. The German-held areas were ruled by German military authorities with the aid of an Italian Fascist puppet regime (see below under *Events*).

On June 10, 1940, the Italian Government declared Italy at war with France and Great Britain, effective the following day. An armistice with the Vichy Government of France was signed the following June 24. Italy attacked Greece without a declaration of war (Oct. 28, 1940), and joined Germany in the invasion of Yugoslavia (Apr. 6, 1941) and of Russia (June 22, 1941) and in declaring a state of war with the United States (Dec. 11, 1941). For details of Italy's withdrawal from the war, see YEAR BOOK for 1943; for developments during 1945, see below.

Events, 1945. For the frustrated and impoverished people of Italy the year, even more than its predecessor, was a grey interlude between a past of darkness, still lying heavily over the land, and a future of light as yet too pale to conquer night. War on the Reich brought no alliance with the Allies. War's end brought an end to the life and

works of Il Duce. But it brought no peace treaty to the prostrated kingdom and no resolution of its problems in the successive crises of the year of victory. The spokesmen of a new life, ever disappointed but persisting in their hopes, vied for popular favor with the apostles of despair, cynicism and neo-fascism. Hunger in January became misery in December, with few finding sustenance in any of the intervening changes of the Italian kaleidoscope.

The Politics of Poverty. The "co-belligerent" Government of Premier Bonomi and Prince Humbert, Lieutenant General of the Realm, was faced at the dawn of the year with the tasks of alleviating mass joblessness and starvation, as was the Allied Commission under Harold MacMillan. The Roosevelt-Churchill program of September, 1944, for increasing supplies to Italy, like the President's order of December to raise the Italian bread ration from 200 to 300 grams daily, was still unfulfilled, thanks to shipping shortages and Anglo-American differences regarding its implementation. Alexander C. Kirk, first U.S. Ambassador to the new regime, presented his letter of credence at the Quirinal on Jan. 8, but was unable to bring calories along with credentials. The collapse of the rationing system obliged many to resort to the black market or to rely on Vatican charity, which supplied 200,000 cheap meals daily in central Italy from Allied stores. Less fortunate Italians faced famine and inflation as best they could. Churchill's statement of January 18 that "we need Italy no more than we need Spain" added insult to injury.

These woes discouraged enrolment in the new Army (begun on Jan. 20) and led to student demonstrations and sporadic rioting. While the Cabinet asked material aid and relief from the fiscal burdens of the armistice, "Separatists" in Sicily agitated for autonomy or independence. New disappointment was felt when the Yalta Conference communiqué failed to mention Italy. In late February the Cabinet announced economies, higher taxes, a state loan and other measures designed to combat inflation and the black market. Not until March 1, however, was the promise of 300 daily grams of bread realized.

With painful slowness and in the face of many obstacles, the Bonomi regime restored Italy's diplomatic relations and obtained gradually increasing relief supplies. Ambassador Alberto Tarchiani presented his credentials in Washington on March 8. Roosevelt bespoke friendship, understanding, and hope. A fortnight later Giuseppe Saragat was named Ambassador to France. Meanwhile, on Feb. 25, the Allied Commission transferred to the Italian Government most of its authority throughout the liberated regions (except military zones near the front), thereby enabling the Cabinet to conduct foreign relations, make appointments and enact legislation without the approval of the Commission. A month later a joint program was evolved for increasing imports as a means of promoting agricultural and industrial rehabilitation.

By midsummer Rome had recovered control of the North, except for disputed frontier areas, and permission to conduct most foreign trade through Italian rather than Allied channels. On the proposal of the United States and over the objection of Yugoslavia, the Council of UNRRA voted on Aug. 22 to include Italy in its relief program. On September 1 the military relief program was replaced by FEA's interim program of \$100,000,000, to be extended until Dec. 31, after which UNRRA's program of \$450,000,000 for 1946 was to be inaugurated. Said Spurgeon M. Keeny, Chief of the

Italian Mission of UNRRA, on October 9: "Men and women dig entire fields by hand for the lack of animals to pull the plow. The wheat crop is the worst in 20 years. Prices are so high that the average family's earnings must nearly all go for food. A shirt costs \$15, a pair of men's shoes \$50. . . ." Despite some signs of convalescence, the sick Italy of the new era of peace was still a charity patient.

Pseudo-Caesar's Demise. Benito Mussolini—driven from power in July 1943, rescued from his foes by the northern barbarians, and propped up as head of the "Republican Fascist" regime behind the German lines—became a corpse with the collapse of the Wehrmacht. Further details of his follies and crimes—e.g. his connivance in the murder in France of Carlo and Nello Roselli, 1937—were revealed through the purge trials and the posthumous publication of Count Ciano's diary. During winter and early spring Mussolini lived on Lake Garda, near the villa of his mistress, Clara Petacci, and posed and postured with all of his waning powers as head of the puppet Cabinet. That he still had followers in the South was shown by the ease with which General Mario Roatta, chief defendant in a trial of Fascist criminals, escaped on March 4 from an army hospital in Rome; by the arrest during March and April of numerous Fascist agitators behind the Allied lines; and by reports of an underground Fascist Party of 20,000 members.

In preparation for the final Allied offensive on the Italian front, AMG made efforts to remember the "forgotten men"—the partisans and the Committee of National Liberation (CNL) of the North. Bologna was liberated on April 21. Giuseppe Dozza, Communist appointee of the CNL, was confirmed as mayor by AMG. While Prince Humbert was received with considerable acclaim by the inhabitants, Mussolini in disguise sought to flee northward from Milan. He was seized by partisans at Nesso on Lake Como on April 26, along with Roberto Farinacci, Achille Starace, and Alessandro Pavolini, all of whom were at once tried and executed. Marshal Rodolfo Graziani was captured nearby and reported to have been put to death.

On April 29, as Allied troops entered the city, Mussolini returned to Milan where he had founded the Fascist Party. He made no speeches. His body lay on the floor of a moving van, alongside his mistress and a dozen Fascists shot with him on the preceding day. The cadaver, after being manhandled by a mob, was strung up by the feet in the Piazza Loretto like a butchered pig, next to that of Clara Petacci, to be gaped at by the curious and the vengeful. The *Osservatore Romano*, Vatican organ, sounded the only note of dissent in the chorus of satisfaction with which the Italian press greeted the news. On the last day of April, Mussolini, Starace, and Clara were buried in the paupers' section of the Cimitero Maggiore. This ugly end of an ugly life marked *finis* to an epoch of fear and horror for Italy and all the world.

Pax and Purge. On April 29 enemy forces in North Italy and Austria surrendered unconditionally. Hostilities ceased at noon on May 2 under the terms signed in Caserta by an agent of Kesselring's successor, Col. Gen. Heinrich von Vietinghoff. Almost a million Axis troops became prisoners. Gen. Mark Clark at once ordered the partisans to maintain discipline and to cease attacks on German units. A thousand Fascists were shot in Milan as partisan violence swept through the Po Valley. A fortnight later leaders of all six parties of the CNL, including Premier Bonomi, Foreign Minister Alcide de Gasperi, Communist Vice Premier Palmiro To-

gliatti and Socialist Pietro Nenni, visited Milan on a tour of the North. On the 20th Nenni was arrested by British police at Vercelli for delivering an unauthorized speech to workers. He was soon released without trial, with his prestige enhanced, rather than diminished, by the episode.

The liquidation of *Fascismo*, partly by mob violence and partly by judicial process, was accelerated by the end of the war. Fulvio Suvich had been sentenced to 24 years' imprisonment on March 12. The missing Roatta received a life term. For remarking at a dinner that he would have shot the judges at the Suvich-Roatta trial, the Duke of Aosta, cousin of the Sovereign and erstwhile "King of Croatia," was dismissed from his post of Admiral by Prince Humbert. In Milan Guido Donegani, ex-President of the National Fascist Federation of Industries, escaped from prison in mid-July, allegedly by bribery, and fled to Switzerland. Numerous other Fascists were tried and sentenced during the course of the year. Donna Rachele, Mussolini's widow, was interned in Terni. Il Duce's daughter, Edda (Countess Ciano), returned from Switzerland and was sent to Lipari Island, though neither she nor her mother were prosecuted as war criminals.

Storm over Trieste. Far from simplifying Italy's foreign relations, the collapse of the Reich raised many new problems, the most pressing of which was the status of Venezia Giulia, with its Slovene population in the hinterland of the Istrian Peninsula. On April 30 Marshal Tito's forces entered Trieste, where they set up a civil administration and convoked a "General Assembly." Bonomi proposed to the Allied Commission that the province be under Allied rather than Yugoslav occupation. As New Zealand troops arrived in Trieste and Gorizia on May 2, over Tito's protest, Communists in Rome attacked student demonstrators who were shouting "Trieste is Italian!" The Communist Party, however, shared this sentiment and was no less opposed than other parties to any cessions of territories containing Italian majorities.

On May 12, as Bonomi renewed his plea for Allied occupation of Trieste, Acting Secretary of State Joseph C. Grew expressed American opposition to Tito's unilateral action. Two days later Washington and London sent notes to Belgrade contending that Trieste and Istria, being Italian territories when the armistice was signed, must remain under Allied control. A similar view was taken of Greek designs on Rhodes and the Dodecanese Islands and of French hopes of annexing Aosta and a strip of Piedmont. Allied troops and warships at Trieste lent weight to the protest. Said Field Marshal Sir Harold Alexander on the 19th: "It is our duty to hold these disputed territories as trustees until their ultimate disposal is settled at the peace conference. . . . We are now waiting to hear whether Marshal Tito is prepared to co-operate in accepting a peaceful settlement of his territorial claims or whether he will attempt to establish them by force." Tito was accused of repudiating an earlier agreement. On the 20th an American battalion withdrew from Trieste in anticipation of possible hostilities.

Marshal Tito accepted Allied proposals "in principle" on May 22 after complex negotiations which continued for several more weeks. On June 9 the State Department announced an Anglo-American-Yugoslav accord by which the western portion of Istria, including Trieste, would be under the Supreme Allied Commander and AMG, with all Yugoslav forces to be withdrawn by June 12 save for a military mission and a detachment of 2,000

men. Tito's forces were promptly evacuated, with the ultimate disposition of the territory and the fixing of the boundary left for later consideration. The most acute inter-Allied crisis of the spring was thus resolved with the Italian Government as an interested but impotent bystander.

From Bonomi to Parri. The Bonomi Cabinet (See YEAR BOOK for 1944, pp. 310 f.) had meanwhile faced the necessity of resigning in accordance with its pledge to step down when the North should be liberated. Early in March rioting in Rome over the escape of Roatta led to demands for Bonomi's resignation. The result was the transfer of authority over the purge to a four-man commission, representing the four parties in the Government: Communists, Liberals, Christian Democrats, and Labor Democrats. The other two parties of the CNL, Socialists and Actionists, remained in "opposition." Humbert's post-victory tour of the North, where he was cheered in Bologna and allegedly fired upon in Milan, revived controversy between monarchists and republicans. Following extended conferences in Rome between party leaders and representatives of the CNL groups in the liberated regions, Bonomi threatened on June 8 to resign and throw the issue of a broadened Cabinet into the hands of Humbert. Prof. Ferruccio Parri, northern leader of the anti-monarchist Actionists who was prominently mentioned as Bonomi's successor, declared "You can strike me off your list. If I were chosen I should regret that the SS didn't have me shot."

Despite his modesty, this courageous partisan leader and staunchly anti-Fascist Genoese inherited Bonomi's post. The latter formally resigned on June 12 but agreed to head a "caretaker government" until Humbert could find a successor acceptable to all the parties of the CNL. The Prince was pained at Nenni's insistence that a constituent assembly was needed to decide the fate of the monarchy. The Allied Commission was said to have warned Bonomi that his successor must observe the armistice terms and maintain the "truce" on the question of the monarchy. After further consultations, Nenni announced on June 17 that the CNL had accepted Parri. The new Cabinet, announced on the 19th and sworn in two days later included all six parties of the CNL:

Premier and Minister of the Interior—Ferruccio Parri, Actionist.
 Vice Premiers—Pietro Nenni, Socialist, and Mauro Brossio, Liberal.
 Foreign Affairs—Alcide de Gasperi, Christian Democrat.
 Justice—Palmiro Togliatti, Communist.
 Finance—Mauro Scoccimarro, Communist.
 Treasury—Marcello Soleri, Liberal.
 Agriculture—Fausto Gullo, Communist.
 Education—Vincenzo Arangio Ruiz, Liberal.
 Transport—Ugo La Malfa, Actionist.
 Reconstruction—Meuccio Ruini, Labor Democrat.
 Industry and Commerce—Giovanni Gronchi, Christian Democrat.
 Food—Enrico Mole, Labor Democrat.
 Post-War Relief—Emilio Luasu, Actionist.
 Public Works—Giuseppe Romita, Socialist.
 Labor and Social Welfare—Gaetano Barbareschi, Socialist.
 War—Stefan Jacini, Christian Democrat.
 Air—Mario Cevolotto, Labor Democrat.
 Navy—Admiral De Courten, Independent.

The new regime strove for economic reconstruction, the election of a Constituent Assembly, termination of the armistice by a peace treaty, and control of the northern provinces, still under AMG. But most of its hopes were hopes deferred. An Italian declaration of war on Japan (July 13) produced no immediate change in Allied policy. Socialists and other republicans hailed the victory of the British Labor Party as a favorable omen. In an article of Sept. 2 in the Roman *Nuova Europa*,

Harold J. Laski urged Nenni to aim at a republic, at socialization, and an end of the Vatican concordat, but reproved him for favoring a union of Socialists and Communists. Summer's end registered little progress toward the achievement of any of the Cabinet's major goals.

Stalemate in Peace-making. Without a treaty defining frontiers, fixing reparations, establishing the status of the colonies, and governing the new Italy's relations with other Powers, few effective steps could be taken to grapple with domestic institutional and economic problems. Rome welcomed the Potsdam decision to entrust the drafting of a treaty to the new Council of Foreign Ministers. Field Marshal Alexander, Ambassadors Kirk and Sir Charles Noel and Rear Admiral Ellery W. Stone, now head of the Allied Commission, were reported to have urged upon Truman and Attlee a settlement involving Italian retention of Tripolitania (western Libya), entry into the UNO, restoration of an Italian Army and Navy, and elections under Allied supervision, all as a means of keeping Italy within a "Western Bloc" and out of the range of Soviet influence. In the State Department those of similar mind were said to be opposed to converting the Italian colonies into UNO trust territories (with possible Soviet participation) and to favor their return to Italy as a buffer against Russia.

Although these counsels did not prevail, other rifts among the Big Three doomed the September meeting of the Council of Foreign Ministers to failure. The U.S. delegation submitted proposals contemplating no changes in the Italian frontiers with France, Switzerland and Austria; acceptance of the old "Wilson Line," with minor changes, as the Italian-Yugoslav frontier, with Trieste (as a free port) remaining Italian, but with Zara and the Dalmatian Islands ceded to Yugoslavia; cession of the Dodecanese Islands to Greece; conversion of Libya, Eritrea, and Somaliland into UNO trust territories, with the first two to become independent in ten years; limitation of Italian armament; restriction of reparations to Italian assets within the jurisdiction of the United Nations; and enactment of an Italian bill of rights. Foreign Minister Alcide de Gasperi, who arrived in London on September 16, repressed his inevitable disappointment at the proposed disposition of the Italian colonies and countered a Yugoslav memorandum asking for all of Venezia Giulia with an Italian memorandum championing the Wilson Line, plus a special status for Fiume and Zara. When Molotov urged that Trieste should go to Yugoslavia and expressed Moscow's willingness to assume a trusteeship over Tripolitania, the Ministers referred the whole issue to their deputies and experts for further study.

The deadlock in the Council, which ended in discord on Oct. 3, left all these questions unresolved. The U.S.S.R. urged a \$300,000,000 reparations bill for Italy, with the proceeds to be divided among the Soviet Union, Yugoslavia, Albania and Greece, and opposed the replacement of the armistice terms by an interim arrangement. The text of the armistice of Sept. 24, 1943, was released on Nov. 6, 1945, but it contained no surprises and no clues as to why it had been kept secret so long. "There is talk of fantastic reparations being demanded of Italy," said Gasperi early in November, "together with spoliation of our colonies and of those territories we gained during the last war. . . . Our aid must not be forgotten. We appeal to General Clark and Admiral Cunningham to remember the activities of both the Italian partisans

and the Italian forces that fought shoulder to shoulder with the Allies."

From Parri to Gasperi. In a realm whose rulers are at the mercy of others who have not yet reached decisions, all politics becomes futile juggling with unrealities. Parri admitted fatigue and bewilderment. Increasingly vehement criticisms of Humbert and the monarchy during October caused the Liberals and the monarchists to accuse the Premier of breaking the "truce" on the institutional question and thus violating his oath of office. Nenni, now in charge of the purge and of preparations for the Constituent Assembly, was assailed by the Liberals and other Rightists. On November 22 two Liberals, Brosio and Ruiz, left the Cabinet. Parri resigned on the 24th, warning his successors to beware of resurgent Fascism and of possible civil war.

The ensuing crisis was revealing of new forces at work but, in the mode of its resolution, changed nothing. The aged Vittorio Orlando, who was anathema to the Left, reported to Humbert on the 27th that he had been unable to form a Cabinet of "national union." Francisco Nitti's aspirations were frustrated for similar reasons. On November 30, to the tune of rioting in the South against the high cost of living, the six parties of the CNL agreed on Gasperi as Premier. His party, the Christian Democrats, stood to the right of center. The liberals, however, still balked. The new Cabinet was not chosen until December 9 in an atmosphere of tedium and weariness. Brosio and Nenni remained Vice Premiers. Leone Cattani, secretary of the Liberal Party, became Minister of Public Works. Gasperi remained Foreign Minister as well as Premier. The Cabinet contained only three new names. Save for promising an end of the purge by March 31 and elections for a Constituent Assembly by April 30, 1946, the Gasperi regime was indistinguishable in policy from its predecessor.

The Poverty of Politics. Italy's plight, both at home and abroad, fostered anew those attitudes of indifference and defeatism which had once paved the way for Fascism. The success of the Moscow Conference and the resultant promise of new progress toward treaty-making (mingled with fears that Italy was to be treated as an "enemy" rather than as a "co-belligerent") were no more able to lift Italian spirits than the prospect of elections and a new Constitution. The poor, miserable in their poverty, saw little hope from the Left. The rich, fearful for their privileges, raised once more the bogey of Communism. Among the symptoms of neo-Fascism, the most striking was the weekly *L'Uomo Qualunque* (*The Common Man*), published by ex-Fascist Guglielmo Giannini, a Neapolitan addicted to monocles, pistols and bodyguards. He condemned the purge, praised Mussolini with faint damns, denounced all politicians, demanded an "Administrative State," and promised that his supporters would win control of the Constituent Assembly and retain power for 20 years. His journal rapidly won a circulation of 800,000, with most of the paper acquired in the black market.

Although the United Nations would plainly not permit the advent of a new Fascism in Italy, it was not clear by the close of the year that the CNL, or any part of it, could create a new democracy in the atmosphere of hunger and despair which prevailed. Ambassador Tarchiani's words of April, spoken in New York at the HQ of American Relief for Italy, Inc., were still true in December in their hopes as well as in their fears: "Problems cannot be solved by words. People who cannot eat cannot make politics. They are a luxury that is not

intended for hungry people. The past is gone. The Italian people, even those who had faith in Fascism, have learned a lesson from hard experience. . . . The present is difficult. The future does not yet look bright. It is for us to prepare for a better, democratic future that will give the children of Italy, together with the children of all the rest of the world, their chance in life."

See FRANCE, GREAT BRITAIN, YUGOSLAVIA, U.S.S.R., UNITED NATIONS, UNITED STATES.

FREDERICK L. SCHUMAN.

JALUIT. The chief island (169° 42' E. and 5° 48' N.) in the Marshall group of the Japanese Pacific Islands (which see). Area, 8 square miles. Civil population (1938), 10,546 (10,038 natives and 504 Japanese). Copra was the principal export. The island has been under the control of United States armed forces since the defeat of Japan in 1945.

JAMES FOUNDATION OF NEW YORK, Inc., was incorporated Aug. 23, 1941, under the Membership Corporation Law of the State of New York, pursuant to the provisions of the will of the late Arthur Curtiss James who died on June 4, 1941. The Foundation will receive, upon the conclusion of the executorial administration of the estate of Arthur Curtiss James, the residuary estate, the amount of which is not yet determined. The income of the funds received, and ultimately the principal of the funds, will be distributed through organized religious, educational, and other charitable corporations. The officer is William W. Carman, President. Trustees: William W. Carman, Robert E. Coulson, Williamson Pell, and Wm. B. Warner. Offices: 40 Wall Street, New York City.

JAN MAYEN. An arctic island between Greenland and northern Norway, 220 miles north-northeast of Iceland. Area, 144 square miles. It is mountainous, Mt. Beerenberg in the north being 8,350 feet high. A meteorological station was established on the island by Norwegians in 1921. The island was formally annexed by Norway on Feb. 27, 1930.

JAPAN. A country of Far Eastern Asia, comprising four main islands (Hokkaido, Honshu, Kyushu, and Shikoku) and a number of smaller islands. Japan and her overseas possessions and conquests passed under the control of Allied armed forces following the surrender of Japan in 1945. Territories which Japan relinquished included Formosa, Japanese Pacific Islands, Korea, Kuriles, Kwantung, Manchukuo, and the southern half of Sakhalin (Karafuto). Emperor of Japan: Hirohito (ascended the throne, Dec. 25, 1926).

Area and Population. Japan proper had an area of 143,667, exclusive of the Kuriles (3,944 sq. mi.) which were occupied by the U.S.S.R. after V-J Day in 1945. Japan proper had a population (1940 census) of 73,114,308 (male 36,566,010, female 36,548,297). There was an increase of 5.6 percent in the population of Japan proper during the intercensal period 1935-40. Vital statistics (rate per 1,000) for 1941: births 29.9, deaths 15.4. Chief cities (1940 census): Tokyo (capital) 7,778,804, Osaka 3,252,340, Nagoya 1,328,084, Kyoto 1,089,726, Yokohama 968,091, Kobe 967,234, Hiroshima 343,968, Fukuoka 306,763, Kawasaki 300,777, Yawata 261,309, Kokura 173,638.

Production. In prewar times manufacturing accounted for about 33 percent of the national income, commerce for 26 percent, and agriculture for 17.7 percent. The chief crops (in metric tons) were: rough rice 11,372,900 in 1943-44, wheat

1,096,600 in 1943-44, barley 1,656,400 in 1942-43, potatoes 2,025,000 in 1943-44, beet sugar 40,000 in 1941-42, cane sugar 84,000 in 1941-42, tobacco 87,100 in 1940-41, tea (exports) 57,500 in 1939, rapeseed 103,200 in 1941, soybeans 348,300 in 1938, raw silk (exports) 29,000. In 1936 the sea-fisheries catch totaled 3,622,000 metric tons, valued at 334 million yen.

Livestock (1938): 7,666,890 cattle, 9,467,400 sheep, 1,828,070 goats, 791,390 donkeys, 791,120 horses, 431,150 mules. In 1940 Japan exported 1,800 million sq. yd. of cotton cloth. The output of rayon and staple fiber during 1942 totaled 135,000 metric tons and 180,000 metric tons, respectively. Other important manufactured products were: cement, newsprint, and motor vehicles. The annual capacity of merchant shipbuilding yards was 500,000 tons.

Minerals and metallurgical output included steel, pig iron, coal, petroleum, copper, magnesium, aluminum, iron ore, lead, zinc, and gold. Electric power capacity in 1941 was estimated at 8 million kilowatts. See **Events**.

Foreign Trade. For Japan proper in 1940, excluding trade with other parts of the empire, imports were valued at 2,492,000,000 yen; exports 2,753,000,000 yen. The aggregate figures of trade in 1940, for Japan, Korea, and Formosa were: imports 3,708,000,000 yen; exports 3,970,000,000 yen. Before Japan entered World War II, trade was mainly with China, British India, Netherlands East Indies, and Great Britain, in the order named.

Finance. The budget for the fiscal year ending Mar. 31, 1945, was balanced at 50,967,000,000 yen. The Finance Ministry completed the first draft of the budget for 1946 on Jan. 2, 1946. It estimated revenue at 15,900,000,000 yen and expenditure at 12,600,000,000 yen. The government debt in December, 1945, was about 170 billion yen. Notes in circulation at the end of July, 1945, totaled 28,456 million yen. The average exchange value of the yen was \$0.2344 in 1940 and 1941; it rose to \$0.27 just prior to Japan's attack upon the United States and Great Britain on Dec. 7-8, 1941.

Transportation. In 1938 there were 15,364 miles of railway lines, of which 11,144 miles were state-owned. Highways extended 591,766 miles in 1940. The air routes totaled 9,598 miles on August, 1939.

Government. The parliamentary system of government established under the Constitution of Feb. 11, 1889 (see **YEAR BOOK** for 1941, p. 303) fell increasingly under the control of Japanese militarist-fascist elements after the conquest of Manchuria in 1931. Beginning in 1940, a totalitarian, corporative state was superimposed upon the old constitutional system by Premier Prince Konoye, the announced aim being state control of all economic, political, and cultural activities. The first step was the "voluntary" dissolution of the old political parties, some of them acting under strong military pressure. A new political agency, known as the Imperial Rule Assistance Association or League for Support of the Throne, was then created by the army leaders and government to function as the instrument of the new totalitarian principles. It consisted of an Executive Council to "convey the will and ideas of those who govern to those who are governed," and a Central Cooperative Council, to "convey the will and ideas of those who are governed to those who govern." Members of both Councils were appointed by the Premier, one-half of the appointees to the Central Cooperative Council being chosen from names submitted by prefectural branches of the Imperial Rule Assistance Association. Branches of the Association were formed

in every town and village, with all leaders appointed from above. In 1942 the Association entered candidates in the elections to the Diet and emerged as the organ of a one-party state (see *YEAR BOOK* for 1942, p. 347). A Supreme Economic Council and a Supreme Cultural Council were appointed in 1940 to supervise economic and cultural affairs.

The Government assumed most of the aspects of an open military dictatorship with the formation of the Tojo Ministry on Oct. 18, 1941. Japan signed the Anti-Comintern Pact with Germany Nov. 25, 1936, and adhered to the Italo-German military alliance Sept. 27, 1940. After signing a nonaggression pact with the U.S.S.R. on Apr. 13, 1941, Japan attacked the United States and the British Empire without warning on Dec. 7, 1941. Premier at the beginning of 1945: Gen. Kuniaki Koiso.

Events, 1945. Imperial Japan, the only oriental country which escaped occupation by the Mongolian conquerors, Genghis and Kublai Khan in the 12th and 13th centuries, and since that time had boasted of its invincibility, was forced to capitulate to the United Nations.

The reason the Japanese escaped occupation of their homeland at the hands of the Mongols 7 centuries ago, was due, not to superior military prowess, but to a disastrous typhoon which wrecked the great Mongol fleet in the Yellow Sea and the Sea of Japan. This led the Japanese to attribute their escape to supernatural causes, as evidenced in their use of the word "kamikaze" (meaning Divine Wind) for their suicide planes used against the American and British warships at Okinawa in the Ryukyu Islands.

Since the year 1944 was recorded in Japan as the "year of the B-29 Superfortress raids," bringing home to the Japanese people the inescapable fact that their country was vulnerable to external attack, it was inevitable that the year 1945 would go down in Japanese history as the "year of the atomic bomb and Japan's capitulation to the superior force and ingenuity of the United Nations."

Never before in Japan's 2,600 years of mythological and recorded history had there been so many calamitous happenings to the war-built empire in such a short period of time. Although Japan's war with China had been in progress for 8 years (14 years counting from Japan's seizure of Manchuria in 1931), and with the United Nations for 4 years, the main Japanese islands were still uninvaded and Japan's well-equipped army, ranging from 5 to 7 million men, was still undefeated.

Tragic Sequence of Events. Then began the tragic happenings, which, in the short space of a few weeks reduced the Japanese Empire from the status of a powerful world power with more than a half-billion people and untold wealth, to that of a nation, of little greater importance than when the country was opened to world trade and intercourse by Commodore Perry of the U.S. Navy in 1853. The tragic happenings of mid-summer, 1945, were in the following sequence:

July 26—Ultimatum to Japan to surrender or suffer complete destruction, issued by the United States, Great Britain and China (with the U.S.S.R. present) at the Potsdam Conference.

Aug. 6—Americans drop first atomic bomb, from B-29 Superfortress, on Hiroshima, important industrial city of Japan, causing almost complete destruction of the city with vast loss of life. (The second atomic bomb to be dropped struck Nagasaki, with equally serious consequence, on Aug. 9.)

Aug. 9—Russia decided to enter the war against

Japan, launching strong attacks against Manchuria, Karafuto (southern Sakhalin), Korea, the Kurile Islands, and Inner Mongolia.

Aug. 10—Japan offered to surrender in a broadcast issued through official *Domei* news agency, providing Allies would consent to retention of Emperor Hirohito.

Aug. 14—Japanese agree to accept surrender terms which, while consenting to retention of Hirohito, specified that the Emperor would be subject to the orders of the Allied Supreme Commander, Gen. Douglas MacArthur.

Aug. 28—(Tokyo Time) United States troops began landing in Japan.

Sept. 2—Japanese envoys signed official surrender documents aboard the U.S.S. *Missouri* in Tokyo Bay, 9:08 A.M. Tokyo Time (Sept. 1, 8:08 P.M. U.S. Eastern War Time).

Sept. 5—United States combat reconnaissance troops enter Tokyo as vanguard for the First Cavalry Division to occupy the Japanese capital and make preparations for the arrival of Gen. Douglas MacArthur.

Sept. 8—General MacArthur entered Tokyo.

Cabinet Resigns. The Japanese cabinet of Premier Kantaro Suzuki announced its resignation on September 16, "because of the new situation created by Japan's acceptance of the Potsdam Declaration which requires a new cabinet of men with fresh ideas." The Suzuki cabinet was succeeded on the following day by a new cabinet headed by Prince Naruhiko Higashi-kuni, a cousin of Emperor Hirohito and the first member of the Japanese imperial family ever to head a Tokyo cabinet. The full cabinet included the following names: Premier and War—Prince Naruhiko Higashi-kuni; Foreign Affairs and Greater East Asia—Mamoru Shigemitsu; Navy—Adm. Mitsumasa Yonai; Transport—Naoto Kohiyama; Information—Takatora Ogata; Munitions—Chikuei Nakajima; Finance—Juichi Tsushima; Justice—Dr. Chuzo Iwata; Agriculture and Commerce—Kotaro Sengoku; Chief of the Legislative Bureau—Naokai Murase; Home Minister—Iwao Yamazaki; Minister without Portfolio—Prince Fumimaro Konoye; Education and Welfare—Kenzo Matsumura. (Admiral Yonai, Transport Minister Kohiyama, and Information Minister Ogata were holdovers from the previous cabinet.)

In its report concerning the new cabinet, *Domei* stated that the Emperor had taken action "without consulting the senior statesmen, as on previous occasions." Since the new cabinet of Prince Higashi-kuni would have the unpopular duty of passing on to the Japanese people and enforcing the orders of the Supreme Allied Commander, Gen. Douglas MacArthur, its personnel was closely scanned in Allied quarters. The first member to arouse serious question was Information Minister Takatora Ogata (head of the Black Dragon Society) whose name appeared on the initial list of Japanese war criminals, and whose arrest was ordered by the supreme war commander. The cabinet secretary promptly announced that he had been dropped.

Obey the Emperor. Indicative of the tension prevailing in Japanese official quarters was a further *Domei* broadcast, combined with editorials in the Tokyo papers, warning the people to "obey all imperial rescripts," and particularly warning religious organizations to "comply with His Imperial Majesty's wishes concerning Japan's acceptance of the Allied peace terms." An editorial in the *Matrichi* said, "If Japan should go back on its word, by taking an evasive attitude in living up to the forthcoming peace terms dictated by the Allied powers, there will be no possibility whatever for Japan to

rise to her feet again." *Domei* also issued a broadcast directed to Japanese nationals throughout the Orient summoning them "to work for the innate glory of our imperial state," and "to devote themselves to the advancement of scientific knowledge, since it was the superiority of enemy science that defeated Japan. . . . We must plan to build up quickly our production in order to rebuild a new Japan."

The editorial department of Tokyo Radio, headed by Kusuo Oya, broadcast a declaration, "We lost the war, but we did not lose the war spiritually. We are still fighting for the independence of the Far East. . . . Our ideals are not wrong in that."

The U.S. State Department in Washington in noting the personnel of the new Prince Higashi-kuni cabinet, called attention to the fact that Prince Higashi-kuni the Japanese Premier had been in office as Chief of Home Defense at the time of the Doolittle air raid (Apr. 18, 1942) and had declared at the time that the crews of the American planes who had been captured in Japanese-occupied territory, "would be court-martialed and severely punished or executed if their attacks were inhuman, that is directed at civilians, causing them to suffer."

Blamed Atomic Bomb. Emperor Hirohito, as well as former Premier Suzuki, placed the Government's official stamp of approval on a declaration, issued just before Suzuki's resignation, claiming that the cause of Japan's defeat was the Atomic Bomb. The declaration said, "The Imperial judgment has already been passed. The way for His Majesty's subjects to follow is self-evident. Japan will face in future further difficulties and hardships which will demand greater endurance on the part of the people. . . . there was no way for Japan to realize her objective in the war. . . . With the use of the new bomb, which has destructive power unprecedented in history, science has brought a change in the method of warfare. . . . Moreover, the Soviet Union on August 9 declared war on Japan and Japan has come to face an unprecedentedly difficult situation. . . . Japan must develop its fortunes in future through its endurance. . . . the way for the people to proceed is in guarding our national policy. . . ."

Staggering Losses. Premier Prince Higashi-kuni, told an extraordinary session of the Diet on Sept. 5, 1945, some further and probably the decisive reasons for Japan's defeat. He said, "Our material fighting resources in the last days of the war were grievously deteriorating. On the other hand, the capacity for supply and replenishment on the part of the Allied nations, with their vast resources and industrial power, was ever on the increase. . . . By May, 1945, Japan's shipping bottoms had dwindled to about one-fourth of what Japan had possessed at the start of the war, and the lack of fuel was causing further shipping difficulties. Rail transportation had steadily become poorer because of Allied air attacks and the depreciation of rolling stock, and after the middle of the current year (1945) was reduced to less than one-half that of 1944. This affected the supply of coal and made importation difficult. . . . Finally the country's production dwindled to such a point that any swift restoration of it came to be considered beyond hope. . . . Steel production was less than one-fourth of the prewar total, coal could not be transported, materials were lacking for the chemical industry and it appeared by the middle of this year that the supply of explosives would be impeded. . . . The lack of foodstuffs was seriously felt by the people as were the gradually growing effects of inflation."

The Premier concluded his address to the Diet with a graphic description of the Allied air assaults on Japan proper, "which were steadily intensified and small, medium and great cities were gradually destroyed in rapid succession with calamitous consequences. . . . Then in August the Allied forces started to use the Atomic Bomb. . . . The ruins of Hiroshima and Nagasaki, which were subjected to attack by this weapon, are indeed too ghastly to look upon. . . . This terrific weapon was likely to result in obliteration of the Japanese people and lead to the total extinction of human civilization. . . . Furthermore the Soviet Union suddenly declared war on Japan, forcing us into the worst international situation. . . ."

Tried Separate Deal with the U.S.S.R. The Japanese government then disclosed officially the information already widely rumored, that the Japanese government had begun negotiations as far back as June, 1945, with the Soviet Union for "conclusion of a treaty of amity and friendship and certain other matters," thus hoping to bring about an early end of the war. According to the Tokyo Radio, a reply to these overtures, "was being awaited, when the Potsdam ultimatum was issued on July 26; thus Japan's surrender was delayed, pending a reply from the Russians." The Soviet Government announced on August 8 that it had communicated to Naotake Sato, Japanese Ambassador in Moscow that Japan's peace proposal "had lost its ground since Japan had repudiated the Potsdam Declaration and that the Soviet Union would enter into a state of war with Japan as from August 9."

Finally (not mentioned in the Premier's address to the Diet), was the knowledge possessed by Japan's military leaders that the Allies were massing the greatest force of sea, land, and air forces ever assembled in world history for a combined attack on Japan's positions both in Japan proper and on the continent of Asia. Also, unmentioned in the Premier's address was the fact fully realized by the Japanese Army that reorganized and freshly-trained, armed and equipped Chinese forces had already begun a general attack on Japan's positions in central China, particularly along the north-south "corridor" which the Japanese Army had established for the double purpose of paralyzing Chinese resistance, and maintaining communications between their far-flung military positions extending from Manchuria, through China to Indo-China, Malaya and Burma.

Suffered Most From B-29's. Information concerning the vast destruction wrought in Japan upon cities and industrial establishments, prior to the dropping of the Atomic Bombs, was provided in reports from advanced American aviation headquarters at Guam and elsewhere in the Pacific. Gen. Carl A. Spaatz, commanding general of the U.S. Army Strategic Air Forces, reported on August 17 that Superfortresses operating from the Marianas, India, and China, flew 32,612 sorties against the Japanese and dropped 169,420 tons of bombs in the 14 months they were operating. The B-29's destroyed the major portion of the industrial productive capacity of 59 Japanese cities, laid 12,049 mines in enemy waters and destroyed or damaged 2,285 Japanese planes. In carrying out these missions the Americans lost 437 Superforts, each carrying 11 men, of which number those from 297 bombers were not rescued. Some 600 airmen from downed B-29's were saved.

Further items in General Spaatz's report were as follows: incendiary attacks burned out 157.98 square miles of Japanese urban industrial areas and left homeless or dead an estimated 8,480,000

persons. Tokyo was ravaged in 6 low-level fire-bombing attacks, leaving in ashes 50.8 square miles. Sixty-one industrial plants in the Tokyo area were attacked and many completely wiped out.

Japanese Casualties from Air Attacks. A Japanese broadcast on August 24 claimed that Allied air attacks on the Japanese home islands had killed 280,000, injured 420,000 and had "almost completely" wiped out the people of 44 cities. The Japanese broadcast claimed that 9,200,000 people were homeless, which combined with those affected outside the home islands, made a grand total of 10,000,000 or one-sixth of Japan's home population. Out of 206 cities of Japan, 44 were almost entirely wiped out and 37 others lost 30 percent of their built-up area. Japanese broadcasts claimed that 2,210,000 Japanese homes were destroyed and 90,000 were damaged.

Documents in the Case. The following are summaries of the various documents, concerned with Japan's capitulation. They are presented in chronological order:

CAIRO DECLARATION

Dec. 1, 1943—The American, British and Chinese governments . . . have agreed upon future military operations against Japan. The three great Allies are resolved to bring unrelenting pressure against their brutal enemies by sea, land and air. The three great Allies are fighting to restrain and punish the aggression of Japan. They covet no gain for themselves and have no thought of territorial expansion. It is their purpose.

(1) That Japan be stripped of all the islands in the Pacific which she has seized or occupied since the beginning of the first World War in 1914, and that all the territories Japan has stolen from the Chinese, such as Manchuria, Formosa and the Pescadores, shall be restored to the Republic of China.

(2) Japan also will be expelled from all other territories which she has taken by violence and greed.

(3) The aforesaid three great powers, mindful of the enslavement of the people of Korea, are determined that in due course, Korea shall become free and independent.

(4) With these objects in view, the three Allies, in harmony with those of the United Nations at war with Japan, will continue to persevere in the serious and prolonged operations necessary to procure the unconditional surrender of Japan.

POTSDAM DECLARATION

July 26, 1945—American-British-Chinese declaration, issued at Potsdam, calling on Japan to surrender:

President of the United States, President of China and Prime Minister of Great Britain have conferred and agreed that Japan shall be given an opportunity to end this war. The prodigious land, sea and air forces of the United States, British Empire and China are poised to strike the final blows upon Japan. The Allied nations are determined to prosecute the war against Japan until she ceases to resist. The result of the futile and senseless resistance of Germany stands in awful clarity as an example to the people of Japan. The might now converging on Japan is immeasurably greater than that which applied to the resisting Nazis laid waste to the land, industry and methods of life of the whole German people. The full application of our military power, backed by our resolve, will mean the inevitable destruction of the Japanese armed forces and utter destruction of the Japanese homeland. Time has come for Japan to decide whether she will continue under the control of self-willed militaristic advisers whose unintelligent calculations have brought the Empire of Japan to the threshold of annihilation, or whether Japan will follow the path of reason. The following are our terms:

(1) There must be eliminated for all time the influence of those who have deceived and misled the people of Japan into embarking on world conquest. We insist that a new order of peace, security and justice, will be impossible until irresponsible militarism is driven from the world.

(2) Until such a new order is established and until there is convincing proof that Japan's war-making power is destroyed, points in Japanese territory to be designated by the Allies shall be occupied to secure achievement of the basic objectives we are her setting forth.

(3) The terms of the Cairo Declaration shall be carried out and Japanese sovereignty shall be limited to the islands of Honshu, Hokkaido, Kyushu, Shikoku and such smaller islands as we designate.

(4) Japanese military forces, after being completely disarmed, shall be permitted to return to their homes with the opportunity to lead peaceful and productive lives.

(5) We do not intend that the Japanese shall be enslaved as a race, or destroyed as a nation, but stern justice shall be meted out to all war criminals, including those who have visited cruelties upon our prisoners. The Japanese government shall remove all obstacles to revival and strengthening of democratic tendencies among the Japanese people. Freedom of speech, religion and of thought, as well as respect for the fundamental human rights shall be established.

(6) Japan shall be permitted to maintain such industries as will sustain her economy and permit the exaction of just reparations in kind, but not those industries which will enable her to rearm for war. To this end, access to, as distinguished from control of, raw materials shall be permitted. Eventual Japanese participation in world trade relations shall be permitted.

(7) The occupying forces of the Allies shall be withdrawn from Japan as soon as these objectives have been accomplished and there has been established in accordance with the freely expressed will of the Japanese people, a peacefully inclined and responsible government.

(8) We call upon the government of Japan to proclaim now the unconditional surrender of all Japanese armed forces, and to provide proper and adequate assurances of their good faith in such action. The alternative for Japan is prompt and utter destruction.

JAPAN'S SURRENDER OFFER

August 10—The Japanese issued a proposal of surrender to the governments of the United States, Great Britain, China and the Soviet Union. (The Soviet Union declared war on Japan on the preceding day, that is, August 9). The Japanese surrender proposal was as follows:

In obedience to the gracious command of His Majesty, the Emperor who, ever anxious to enhance the cause of world peace, desires earnestly to bring about a speedy termination of hostilities with a view to saving mankind from the calamities imposed upon them by further continuance of the war, the Japanese government several weeks ago asked the Soviet government, with which neutral relations then prevailed, to render good offices in restoring peace vis-à-vis the enemy powers. Unfortunately, these efforts in the interest of peace having failed, the Japanese government in conformity with the august wish of His Majesty to restore the general peace, and desiring to put an end to the untold sufferings entailed by war as quickly as possible, have decided upon the following:

(1) The Japanese Government are ready to accept the terms enumerated in the joint declaration which was issued at Potsdam on July 26, 1945, by the heads of the governments of the United States, Great Britain and China, and later subscribed by the Soviet government, with the understanding that the said declaration does not comprise any demand which prejudices the prerogatives of His Majesty as a sovereign ruler.

(2) The Japanese government sincerely hope that this understanding is warranted and desire keenly that an explicit indication to that effect will be speedily forthcoming.

THE ALLIES' REPLY

August 11—With regard to the Japanese government's message accepting the terms of the Potsdam Declaration but containing the statement "with the understanding that the said declaration does not comprise any demand which prejudices the prerogatives of His Majesty as a sovereign ruler," our position is as follows:

(1) From the moment of surrender the authority of the Emperor and the Japanese government to rule the state shall be subject to the Supreme Commander of the Allied Powers, who will take such steps as he deems proper to effectuate the surrender terms.

(2) The Emperor will be required to authorize and insure the signature by the government of Japan and the Japanese Imperial Headquarters of the surrender terms necessary to carry out the provisions of the Potsdam Declaration, and shall issue his commands to all the Japanese military, naval and air authorities and to all the forces under their control wherever located, to cease active operations and to surrender their arms, and to issue such other orders as the Supreme Commander may require to give effect to the surrender terms.

(3) Immediately upon the surrender the Japanese government shall transport prisoners of war and civilian internees to places of safety, as directed, where they can quickly be placed aboard Allied transports.

(4) The ultimate form of government of Japan shall, in accordance with the Potsdam Declaration, be established by the freely expressed will of the Japanese people.

(5) The armed forces of the Allied Powers will remain in Japan until the purposes set forth in the Potsdam Declaration are achieved.

JAPAN'S SURRENDER MESSAGE

August 14—Communication of the Japanese government addressed to the governments of the United States, Great Britain, Soviet Union and China. With reference to the Japanese government's note of August 10, regarding

their acceptance of the provisions of the Potsdam Declaration and the reply of the governments of the United States, Great Britain, the Soviet Union and China, sent by American Secretary of State Byrnes under the date of August 11, the Japanese government have the honor to communicate to the governments of the Four Powers as follows:

- (1) His Majesty the Emperor has issued an imperial rescript regarding Japan's acceptance of the provisions of the Potsdam Declaration.
- (2) His Majesty the Emperor is prepared to authorize and insure the signature by his government and the Imperial General Headquarters of the necessary terms for carrying out the provisions of the Potsdam Declaration. His Majesty is also prepared to issue his commands to all the military, naval and air authorities of Japan and all the forces under their control, wherever located, to cease operations, to surrender arms and to issue such other orders as may be required by the Supreme Commander of the Allied Forces for the execution of the above-mentioned terms.

INSTRUCTIONS FOR JAPAN'S SURRENDER

August 14—Instructions for formal Japanese surrender transmitted on behalf of the Allied nations by United States Secretary of State Byrnes.

With reference to the communication of today's date transmitting the reply of the Japanese government to my communication of August 11, which I sent on behalf of the governments of the United States, China, the United Kingdom and the Union of Soviet Socialist Republics, which I regard as full acceptance of the Potsdam Declaration, and of my statement of August 11, 1945, I have the honor to inform you that the President of the United States directed that the following message be transmitted to the Japanese government.

- (1) You are to proceed as follows: Direct prompt cessation of hostilities by Japanese forces, informing the Supreme Commander for the Allied Forces of the effective date and hour of such cessation.
- (2) Send emissaries at once to the Supreme Commander for the Allied Powers with information of the disposition of the Japanese forces and commanders, and fully empowered to make any arrangements directed by the Supreme Commander for the Allied Powers to enable him and his accompanying forces to arrive at the place designated by him to receive the formal surrender.
- (3) For the purpose of receiving such surrender and the carrying of it into effect, General of the Army Douglas MacArthur has been designated as the Supreme Commander for the Allied Powers, and he will notify the Japanese government of the time, place and other details of the formal surrender.

OFFICIAL ANNOUNCEMENT

August 14—President Truman's Statement.

I have received this afternoon a message from the Japanese government in reply to the message forwarded to that government by the Secretary of State on August 11. I deem this reply a full acceptance of the Potsdam Declaration, which specifies the unconditional surrender of Japan. In the reply there is no qualification. . . . Arrangements are now being made for the formal surrender terms at the earliest possible moment. . . . General Douglas MacArthur has been appointed Supreme Allied Commander to receive the Japanese surrender. . . . Great Britain, Russia and China will be represented by high ranking officers. . . . Meanwhile the Allied armed forces have been ordered to suspend offensive action. . . . The proclamation of V-J Day must wait upon the formal signing of the surrender terms by Japan.

Japan Now Fourth-Rate Nation. General MacArthur, Commander-in-Chief of Allied Forces in the Pacific, declared on Sept. 11, following the landing of American forces at Yokohama, that Japan has now been reduced to a "Fourth-rate State." He said that in reports concerning Japan's capitulation, the fact had been overlooked that Japan's army also had been defeated in addition to the country's navy and air establishments. He said that Japan's army, which had long ago convinced the Japanese people of its invincibility, would now be broken up and returned to civil life with a record of defeat. He emphasized that American and Allied responsibilities, aside from the release and repatriation of war prisoners, would be to land and disperse strategically throughout the Japanese archipelago, sufficient occupation troops to secure utmost security against any possible outbreak of violence; and to guarantee the complete disarmament, demobilization and return to their homes of all Japanese mili-

tary personnel from general and admiral to the lowest grade soldier and sailor.

Imperial Staff Broken Up. The most effective measures, looking to the break up of Japan's military establishment and the destruction of the prestige which has surrounded military life in Japan from earliest times were set in motion on September 10 when General MacArthur ordered Emperor Hirohito to abolish the Japanese Imperial General Headquarters. The order became effective as soon as there were sufficient American forces ashore to guarantee against resistance by Japanese remnants not yet disarmed. The Imperial General Headquarters, including both Army and Navy, had been responsible for the Russo-Japanese War of 1904-05, territorial expansion in the Pacific in World War I and the initiation of the conflict in Manchuria in 1931. The order amounted to the lopping off of the head of Japan's vast military establishment, which included a minimum of 6,000,000 troops stretching from Hokkaido, the most northern Japanese island, to Singapore, Netherlands East Indies, and the Solomon Islands in the tropics; and also the remnants of Japan's fleet personnel, and finally the dismantling of innumerable bases, barracks, fortified zones, forts and other military establishments throughout Japan's far-flung oriental empire.

The total number of American and Allied troops required for the occupation of Japan was estimated at 400,000 to 500,000. Approximately 150,000 men were used in the initial occupying force, which took up positions in 10 major Japanese ports and naval bases, but it was announced that 10 additional divisions were scheduled for landing within the first six weeks. A later statement by General MacArthur that Japan could be policed by 200,000 regular troops, was questioned by the U.S. State Department in Washington.

Japanese Atrocities. The U.S. State Department on September 5 made public a detailed documented report concerning Japan's mistreatment of American and Allied military and civilian prisoners. The report, which occupied two full pages in the *New York Times* of September 6, told of repeated attempts to induce the Japanese to consent to visits to American and Allied prison camps in Japan on the part of officials of the neutral (Swiss) International Red Cross. With few exceptions these attempts were refused by the Japanese military officials; the Japanese also refusing to supply the names of prisoners held. Of large sums of money transmitted from the United States to prisoners for purchase of clothing and food, little ever reached its destination, stated the report. The U.S. State Department also repeatedly protested breaches on the part of Japan of the Geneva Convention, concerning treatment of prisoners of war and civilian internees. The most serious violation, according to the report, was the location of prison camps in the vicinity of war objectives, resulting in some cases, of Allied prisoners being killed during American bombing raids.

The report contained texts of official protests containing the signatures of Secretaries Hull and Stettinius and Assistant Secretary Grew of the U.S. State Department, which had been forwarded to the Japanese authorities (through the Swiss Government) concerning a long category of atrocities, including the decapitation of airmen and the murder of other Americans; prisoners being forced to work in Japanese war plants; prisoners being machine-gunned in the sea, following the sinking of torpedoed ships upon which they were being transported to Japan; of innumerable cases of torture and inhuman treatment at the hands of the Jap-

anese gendarmerie; of starvation diets provided in camps when food and medicines supplied by the American Red Cross were available. The U.S. State Department charged that the practice of the Japanese in locating prisoners' camps near legitimate bombing objectives was "both persistent and methodical," the Japanese object being to protect certain plants from bombardment. Stated the report, "We are forced to draw the conclusion from the continued practice of the Japanese Government in locating prisoner-of-war camps in close proximity to docks, warehouses, war factories, railroad yards and other military objectives that the Japanese Government was carrying out a deliberate policy of attempting to render certain points or areas immune from bombardment by the presence of prisoners of war in such areas." The report cited several specific instances at Shanghai and elsewhere where such situations prevailed.

The U.S. State Department announced that the Swiss Government had been authorized to represent Japanese interests in the United States and in consequence was permitted to visit all camps in the United States where Japanese were held. The ill-treatment, starvation and torture of prisoners extended throughout the territories under Japanese occupation from Manchuria and Korea—where many Americans were held—to Siam and Malaya—where tens of thousands of Britons, Dutch and other occidentals, including a smaller number of Americans were held and forced to work in disease-infested jungles and swamps, with little or no medical attention available.

The following reports of atrocities appeared in the newspapers in the period from January 1 to mid-September when most of the Allied prisoners had been released. Five American fliers, shot down over Borneo, were executed by the Japanese on January 13. Large numbers of wounded prisoners on Wake Island were bayoneted following surrender. Of 644 survivors of the American cruiser *Houston*, torpedoed in the battle of the Java Sea (total personnel 1,012), 368 managed to reach the beaches of the island of Java where they were captured by the Japanese. Of these 220 were sent to Burma, where 69 died, along with 62 other Americans and some 20,000 Britons while laboring in the steaming sun in the construction of the Burma-Thailand Railroad. The remainder of those rescued from the *Houston*, were sent to Japan to labor as technicians.

American children in Japanese concentration camps were denied shoes and clothing in sub-zero weather. Japanese guards tossed grenades into the hold of a sinking ship off the Philippines which contained 750 American prisoners. The Japanese made a huge bonfire out of an air-raid shelter filled with 150 prisoners and then buried the survivors alive. Survivors of forced labor gangs composed of American, British and Australian war prisoners on the Burma-Thailand Railway stated that the prisoners called it the "railway of death" because every tie laid beneath the tracks cost the life of an Allied war prisoner. According to a report by Australian survivors, one railway bridge at the Thailand end of the railway, cost 600 men. When the men dropped from disease and fatigue, the Japanese guards tossed them over a cliff. Prisoners suffered from malaria, dengue fever, and tropical ulcers, but no medicines were available. Articles of clothing and jewelry belonging to the prisoners were exchanged for food. Thirty men were killed during an Allied air raid on a camp in Burma where Allied prisoners were deliberately housed adjoining an ammunition dump.

Seriously ailing prisoners in a hospital at Shima-

gawa, Japan, were used by the Japanese doctors as human "guinea pigs" in fantastic experiments recalling the sorcery and sadism of the Middle Ages. An American bomber-pilot at Shanghai was hung by his thumbs for twenty minutes and seven other Army and Navy pilots were severely beaten by the Japanese guards in an effort to force them to disclose American plans for the invasion of the Japanese homeland. A report from the Netherlands East Indies stated that at least 50,000 Allied prisoners, chiefly Dutchmen, but also including many Britons and some Americans, died in prison camps in the Netherlands East Indies. Allied Headquarters in Manila reported on August 18 that a grand total of 155,000 Americans, Britons, and Dutchmen had been held throughout most of the war by the Japanese in more than 100 camps and prisons in the Japanese homeland and on the continent of Asia. Approximately 7,000 Americans were held in eight camps scattered about Shanghai, some in close proximity to military objectives.

The number of prisoners held in the Japanese home islands was estimated at approximately 32,500. About 200 high-ranking officers and some 1,200 American enlisted men were held in a camp near Mukden, Manchuria. A Red Cross report stated that the Japanese originally interned, after Pearl Harbor, some 200,000 Allied troops and civilians, exclusive of native troops in the various Asiatic countries which the Japanese occupied. Deaths in camps and on torpedoed ships, up to April, 1945, numbered in excess of 50,000, mostly prisoners of war. The number held at the time of the Japanese surrender was estimated at 75,000 to 85,000 prisoners of war and 60,000 to 70,000 civilian internees. These prisoners were held in camps in Japan proper, Korea, Manchuria, Shanghai, Peiping, Hong Kong, Canton, Indochina, Siam, Malaya, and Netherlands East Indies.

A report from Manila placed the total number of prisoners at 140,000, of which 100,000 were British, 33,000 Americans, and the remainder Dutch. Heading the list was Lieut. Gen. Jonathan M. Wainwright, who was held first in Formosa, then taken to Manchuria, and finally liberated in mid-August. Another widely known prisoner, Lieut. Col. James P. Devereux, former commander of Wake Island, was found in a secret camp in Hokkaido, Japan. Julius Ochs Adler, special correspondent for the *New York Times*, who investigated Nazi concentration camps in Europe, expressed the opinion that Japanese treatment of American soldiers, airmen, sailors, and marines was in many instances as horrible and atrocious as that meted out by the Germans to inmates of Nazi camps.

Comm. Harold L. Stassen, flag secretary to Admiral Halsey, described a central Japanese "inquisition" camp where Allied prisoners were starved and tortured systematically. Most of the prisoners in the inquisition camp were submarine men and fliers. The prisoners were told by their Japanese guards that the Red Cross would not be notified of their capture and they would be considered "dead or missing," hence there would be no record of them. The prisoners, according to Commander Stassen, were taken to the camp blindfolded and placed in groups of fifteen in cells, 8 ft. by 10 ft., while some were placed in solitary confinement. All were tortured and starved in an effort to extort information from them. There were no sanitary facilities and the men were forced to live in filth, and while being interrogated by officers, were subjected to kicks, slaps, lashings and variations of the thumb-screws of medieval times, crushing

the fingers or jabbing matches under fingernails.

Many died under the torture. Some 1,000 men from this camp were released in a badly emaciated condition on August 31. Every one was suffering from malnutrition and many had lacerated hands and fingers showing results of torture. An American physician, Dr. Gottfried, imprisoned with the men, was prevented from practicing his profession and forced to work in the camp with a pick and shovel. Dysentery was prevalent and more than 5,000 of the men liberated immediately after the Japanese capitulation, were in dire need of hospital treatment. Ninety-five American airmen and eight Englishmen, mostly from carrier planes, were found in an unregistered torture camp near Yokohama.

Economic Control of Japan. Gen. Douglas MacArthur announced on September 19 the organization of an economic and scientific section, under the direction of Col. Raymond C. Kramer, which was designed to "look into every nook and cranny" of Japanese business and science and to make recommendations for the control thereof. The creation of the new department marked the first step on the part of the Allies to obtain definite information concerning the economic, industrial, financial, mining and scientific resources and services of Japan and Korea for the purpose of formulating Allied policies looking toward the conversion of Japan's over-expanded war industries to peacetime and peaceful production. It was stated that the job of Colonel Kramer would be to make recommendations for the dismantling of industrial enterprises, removal or transfer of machinery and non-military records, recommend basic changes in the character of products, transfer of money, bullion or securities into or out of Japan.

The announcement of the creation of the new department followed, and may have been intended, to circumvent an attempt on the part of Premier Gen. Prince Naruhiko Higashi-kuni and his Japanese supporters to obtain "substantial credits and economic assistance from abroad for use in the reconstruction of Japan." General MacArthur's headquarters reported that Japan, as a defeated nation, would be required, first, to pay the costs of occupation, and eventually, reparations for damages. It was therefore pointed out that Japan was in no position to ask for financial assistance. It was pointed out that Japan was already paying the costs of occupation because the salaries of all officers and enlisted men were being paid in Japanese yen obtained from the Bank of Japan or printed by the Allies as military currency. The circulation of foreign currency in Japan was forbidden by the Allied command. The Japanese authorities were also compelled to provide housing for the Allied headquarters staff at Japanese expense.

Further lines of activity of the Economic and Scientific Section, included supervision over exports and imports, use of transportation and public utilities, conversion of available facilities to civilian use, coordination of the activities of scientific and economic missions from the United States and other nations. It also was expected to prepare inventories of economic and scientific resources of Japan, including an investigation of patents and cartel agreements between Japan and other countries, and was authorized to make recommendations concerning distribution of civilian goods and price stabilization.

In a further statement on the same subject by Dean Acheson, Acting U.S. Secretary of State, issued following General MacArthur's announcement, it was declared that Japan "will be put in a

position where it cannot renew aggressive warfare; that the present economic and social system in Japan which makes for war, will not be permitted to continue, and whatever it takes to carry out this policy will be used to carry it out." The U.S. State Department's declaration was interpreted as a forecast of revolutionary changes in the economic and social structure of Japan which centered around breaking down the economic power of the great families which dominated Japanese economic life.

Other measures designed to establish, more securely, Allied control of Japanese affairs, included:

- (1) Dissolution of the Great Japan Political Society, totalitarian political association, inaugurated on March 30, 1944, ostensibly for the purpose of uniting all political opinions and the creation of harmonious relations between the cabinet of Premier Koiso and the people. The Great Japan Political Society succeeded the Imperial Rule Assistance Society, which had served as Japan's sole political party since 1941. In addition to the foregoing action, the House of Representatives of the Diet formed a committee to take over the functions previously exercised by the totalitarian parties.
- (2) Japanese War Office ordered to form a committee to investigate atrocities and maltreatment of Allied prisoners.
- (3) Japanese government issued Imperial Decree whereby all measures taken by the government at the request of the Allied Supreme Commander, automatically become legal.
- (4) Approved a plan to manufacture and encourage sale of all-wave radios, in order to permit the Japanese people to hear foreign broadcasts. Previously all radios in Japan were tuned to the official Japanese stations only.
- (5) Instructed Gen. Kenji Doihara to cooperate with the U.S. Eighth Army Headquarters in facilitating the American occupation of Japan. Gen. Doihara succeeded Field Marshal Gen. Sugiyama, who committed suicide.

Desperate Economic Situation. A report in the *New York Herald Tribune*, from its correspondent, Homer Bigart, with the occupation forces in Tokyo on September 12 quoted a number of leading Japanese executives concerning the desperate economic situation prevailing in Japan at the time of the capitulation. Ryozo Asano, important figure in the Japanese steel industry, said that the leading Japanese businessmen never thought Japan could defeat the United States and were appalled at the Japanese attack on Pearl Harbor, but they couldn't say anything, "because we feared the military would clap us in jail; we were afraid of death." Asano said that many small business men had been jailed because of their defeatist attitude. He declared, "Even in June when the rapid disintegration of Japan's industry produced almost complete paralysis of war production, we were unable to obtain the Emperor's ear." "We were badly beaten, our communications were crippled, but we couldn't do anything about it," he said.

Miyasaki, head of the powerful Mitsui interests, said the greatest single factor in the industrial collapse, was the inability to repair broken down machinery. Lack of spare parts paralyzed railroads, automobiles, trucks, street cars, and the telephone system. Thousands of workers, who fled from the cities because of the B-29 air raids, were lost to the industries because there was no means of communication and transportation between the factories and the countryside. According to Miyasaki, Japanese steel production, best barometer of the country's industrial capacity, fell from a peak of 4,500,000 tons in 1942 to less than 500,000 tons for the present year. Only 253,000 tons were produced in April, May and June, first quarter of the fiscal year. Fujiyama, head of the Japanese Chambers of Commerce, said that the Allied blockade had cut off coal and iron imports from North China

and this paralyzed the steel industry. Japan was forced to depend on inferior Japanese coal and on 42 percent iron ore. Then, said Fujiyama, our railroads broke down. The people ran away to the country and the workers never came back.

Terai, president of the Nippon Yusen Kaisha, revealed the amazing decline in Japanese ship construction. He said that shipbuilding had declined from 1,583,000 tons last year to 163,000 tons in the period from April to July this year, and in the closing month before the end of the war shipbuilding was at a standstill. Ship losses, due to American submarine action, bombers, and mines, had risen from 328,500 tons last year, to 798,000 tons in April, May and June this year, or almost five times current production. He said that mines sowed in Japanese harbors and sea lanes had sunk twice as many ships as bombers and twelve times as many as the submarines sank. He said that the scarcity of bauxite had paralyzed the aluminum industry, making it necessary to build airplanes from plywood.

All of the industrialists severely criticized Japanese army mobilization, which stripped the shops of skilled workers. Serious political unrest was expected as a result of widespread unemployment. Asano, president of the Japan Steel Tube Company, predicted 8,000,000 unemployed and declared that if food could not be imported at least 7,000,000 would starve in the coming winter. He said that practically all workers are on half-ration, due to shortage of rice; that the rice crop this year would amount to only 10,000,000 tons as compared to 13,000,000 tons last year. This year there will be no imports from Korea or Manchuria. Production of farm implements and fertilizers had dropped to one-quarter of normal. He said there was great uncertainty among the industrialists, because there had been prior to mid-September no instructions concerning future production from the Allied Headquarters.

That Japanese leaders were long aware of the critical economic situation, but had decreed to continue the war in the face of it, was indicated in a report from Washington (Federal Communications Commission) which stated that the Japanese had ordered a two-months state of emergency for the railroads in order to speed distribution of food and military supplies. As a result of American air assaults, the railways had been placed under military control in order to effect repairs and break freight jams. All civilian railway workers had been formed into "combat corps" to meet the desperate situation of the Japanese homeland being turned into a battlefield. . . . Private property rights in devastated cities were cancelled in order that the rubble could be cleared away and the land converted to food production. Orders were issued directing that devastated areas in 35 cities be planted with sweet potatoes, which could be used for food and as a source of supply for gasoline substitute. The cabinet spokesman hinted at a "hitherto untried material" which would be developed for food purposes.

Japan's Textile Industry. A report in the New York Times, from its correspondent in Tokyo (September 10) stated that serious anxiety prevailed concerning the Japanese clothing situation. The Japanese textile industry, particularly cheap cotton cloth, which dominated the Far East prior to the war, and was the largest customer for American raw cotton, is practically non-existent today. This is due, according to the correspondent, to two causes: American bombings and the fact that it was swallowed up in the production of war ma-

terials. A further cause, of which the correspondent apparently was not aware, was that the Japanese cotton industrialists, for nearly two decades had been following a program of decentralizing their industry by establishing cotton mills on the Asiatic continent—at Shanghai, Tsingtao, Tientsin, in Korea, and Manchuria—where cheap native labor and supplies of cheap cotton were available. These mills on the continent will now, in all probability, be taken over by the industrial leaders of the countries where the mills are located.

Japan's Economy at Rock Bottom. The correspondent of the New York Times in Japan, George E. Jones, reported during September that it would be necessary for Japan to "start the task of feeding, clothing and housing her people from rock bottom, and that only in the indefinite future would Japan be able to turn to the long-range work of reconstructing an industrial economy that was once one of the world's most powerful." Referring to current conditions, Mr. Jones stated that thousands of demobilized Japanese soldiers flood the railway stations and war-workers are streaming home from the cities. He said that most conservative estimates placed Japan's unemployed at 10,000,000. There are no industries, and there are no raw materials to build up light industries and there is no shipping even to bring home all overseas servicemen within less than two or three years. The number of Japanese servicemen and civilians to be brought home ultimately—within two or three years—is estimated from 3,000,000 to 6,000,000. And when they return they will find, according to private estimates, that 2,210,000 of their dwellings were destroyed and 9,200,000 people made homeless. The Japanese Home Ministry estimated that Japan needed 5,000,000 houses and that 190,000,000 cubic feet of lumber would be required. In the meantime much of the population of Japan's devastated cities are living in "shanty-town" collections of scrap tin dwellings that have sprung up. They lack both sanitation and warmth.

Regarding the food situation, Mr. Jones said that there had been a 10 percent reduction in the food ration in July, cutting the individual food diet to 1,500 calories daily, or a third of the American standard. The food crisis would be aggravated as the millions of servicemen and civilians are returned from abroad, "where they have been living on the country." Generally the Japanese look toward next year with dread and there will undoubtedly have to be a dole system for the homeless and hungry. Farming has suffered severely due to the exodus of workers from the country to the war industries. At present the Japanese have on hand 900,000 tons of rice, wheat, and potatoes, which were imported from abroad, and they are said to have more than 9,000,000 tons carried over from 1943 and 1944. Next year, however, there will be a deficiency of 1,500,000 tons of staple goods. Cotton industrialists estimated that 820,000 bales of cotton would be required to give the Japanese people half of their peacetime cotton cloth consumption.

Japan's Naval Losses. Japan's once proud fleet and merchant marine were reduced to almost insignificant remnants as a result of the blasting they received from American air and undersea power. Adm. Chester M. Nimitz stated on August 21 that Japan's once-powerful navy consisting of 382 combat and auxiliary vessels had been reduced to a bare 55, most of which were unseaworthy. In addition Japan's merchant fleet, once dominant on the Pacific and third in world trade, has been reduced to a little more than 1,000,000 tons of small and

antiquated vessels. The figures, thought to be approximately accurate, had been supplied by the Japanese surrender envoys in Manila.

MacArthur's "Revolution." The following is a summary of the outstanding "directives" issued by General Douglas MacArthur up to the end of 1945:

- 1—Dissolution of the Imperial Army and Navy General Staffs.
- 2—Arrest and trial of war criminals ordered.
- 3—Abolition of secret semi-military "Black Dragon Society" and order for arrest of leaders as war criminals.
- 4—Abolition of military censorship and dissolution of the semi-official *Domei* news service, which had become an organ of the military. Order issued for formation of a new cooperative news distribution organization to be known as Kyodo or "Cooperative." Kyodo is prohibited from sending correspondents abroad, hence will depend upon foreign news agencies for world news. The Japanese newspapers were instructed to initiate "open discussions" on subjects the people were interested in, including the status of the emperor system and trial of war criminals.
- 5—Japanese schools were ordered purged of all elements regarded as responsible for "bringing war and suffering to the people." Order meant dismissal of all known militarists and ultra-nationalists from the school system. It meant the "screening" of some 400,000 teachers throughout the school system from the grades to the universities.
- 6—Japanese women given the vote.
- 7—Labor Unions were legalized.
- 8—Political prisoners, allegedly numbering a million persons, ordered released from various prisons.
- 9—Four great family monopolies ordered dissolved in order to aid Japanese economic development along democratic lines. Companies affected are: Mitsui, Mitsubishi, Sumitomo, Yasudo, Zaibatsu. The large families, a hang-over from feudalism, had interlocking directorates, thus controlling much of the business, industries, shipping and overseas trade of the Empire. The order for the dissolution of the large Japanese family monopolies had serious repercussions in the United States where many large American companies, chiefly in the electrical and machinery lines, had close relations, even interlocking stock interests in the Japanese concerns.
- 10—Japanese narcotic monopoly ordered dissolved and stocks confiscated.
- 11—Japan ordered to sever all diplomatic ties with other countries and withdraw all diplomats from abroad.
- 12—Japanese constitution ordered revised.
- 13—War "loot" valued at hundreds of millions of dollars seized. Included were stocks of gold and silver seized by the Japanese Army in other Asiatic countries.
- 14—Japanese secret or "thought police," ordered dissolved and all repressive laws ordered repealed.
- 15—Freedom of speech, political activities and religion proclaimed. Order involved discontinuance of Shinto or Emperor-worship as a state religion.
- 16—Fifty percent reduction of government personnel ordered. Total number of government personnel estimated at 300,000.
- 17—All monopolistic and feudalistic land holdings, a hold-over from feudalistic times ordered dissolved.

Hirohito's New Year's Rescript. Emperor Hirohito, in a New Year's (1946) Imperial Rescript, declared that his divinity—the ancient tradition taught in the schools of the throne descended from the sun goddess Amaterasu—"is a false conception" based on legends and myths. The rescript repudiating the divinity creed was regarded as one of the most devastating declarations since the arrival of Commodore Perry. According to observers in Tokyo the rescript will rank as one of the most important state papers in Japanese history.

Revision of School Books. General MacArthur issued an order at the end of the year for a complete revision of all Japanese school books teaching the "divinity" and racial "superiority" theories. The order will necessitate the destruction of tens of thousands of school books now used throughout the school system.

Far Eastern Commission and Allied Council for Japan. The role of Gen. Douglas MacArthur as sole representative of the Allied Chiefs of Staff in carrying out the terms of the Potsdam Declaration, was modified considerably as a result of the meeting of the Big Three in Moscow in the last week of December, 1945. According to the Moscow Com-

munique of December 27, there is to be created a Far Eastern Commission to include representatives of the Soviet Union, United Kingdom, United States of America, China, France, Netherlands, Canada, Australia, New Zealand, India, and the Philippine Commonwealth.

In addition the Big Three Foreign Ministers Conference in Moscow announced the formation of an Allied Council for Japan, which will have its headquarters in Tokyo under the Chairmanship of the Supreme Commander for the Allied Powers. The Allied Council will include the Supreme Commander, (who shall be Chairman and the United States member) and representation of the Soviet Union, the Republic of China, and the United Kingdom.

JOHN B. POWELL.

JAPANESE PACIFIC ISLANDS (Nanyo). The former German possessions in the Pacific, north of the Equator (130° to 175° E. and 0° to 22° N.), over which Japan was appointed mandatory in accordance with the terms of the Treaty of Versailles, 1919. The mandate comprised some 1,458 islands, islets, and reefs, extending over an area of 1,200 miles north to south and 2,500 miles west to east. There are three main groups: (1) MARIANA or LADRONE (14 islands), including Saipan, Tinian, Rota; (2) CAROLINE (577 islands), including Yap, Palau (Babeldaob), Koror, Truk, Ponape, Kusaie; (3) MARSHALL (60 islands), including Jaluit. Total area, 830 square miles. Some of the islands were conquered and occupied during 1944 by United States armed forces. In 1945, following the defeat of Japan, all the islands passed under the control of the Allies. Population (1940 census), 131,157 (72,540 males and 58,617 females).

Production and Trade. The main products were sugar, maize, coffee, phosphates, tapioca, bananas, breadfruits, copra, alcohol, vegetables, fish, forest products, and bauxite. Trade (1938): imports were valued at U.S.\$8,723,000 (rice, machinery, cloth, oil, wax, wood and wood manufactures, cigarettes, and alcohol were the chief items); exports were valued at U.S.\$13,350,000.

Government. Budget (1940): revenue U.S.\$2,564,182; expenditure U.S.\$2,540,228. Under Japanese rule, the administrative affairs of the mandate were managed by a governor who was subject to the direction of the Japanese Minister of Overseas Affairs. Headquarters of the Governor were in Koror, one of the Palau islands in the western Carolines. See WORLD WAR.

JARVIS ISLAND. A mid-Pacific island (0° 23' S. and 159° 54' W.), south of Hawaii; owned by the United States. The island lies in the path of the main steamship lanes and airways from Honolulu to New Zealand and Australia. In former years guano was produced from the island but it remained uninhabited for years until 1936 when the U.S. Dept. of the Interior set up an aerological station.

JEWISH WELFARE BOARD, National. Organized Apr. 9, 1917, the Board has a two-fold purpose. It is the National Association of Y.M.H.A.'s, Y.W.H.A.'s, and Jewish Community Centers in the United States and Canada. It also provides for the religious and welfare needs of men and women in the armed forces of the United States. The Board is composed of 288 constituent societies in the United States and Canada, which have 400,000 members. Ten regional organizations of Jewish Centers are affiliated in its work.

The Board serves the Jewish Center field and

deals with problems relating to administration, vocational guidance, education, cultural, and recreational activities, special Jewish cultural programs, community surveys and institutional studies, club leadership training, summer country and day camps, health and physical education, forums, concerts and lectures, and personnel placement; it maintains a field service in contact with its affiliated organizations. The Jewish Center Division of the Board cooperates closely with government and private agencies and brings materials and plans to the attention of constituent societies.

The National Jewish Welfare Board is one of six organizations of the United Service Organizations (q.v.). In this connection, its activities are conducted on a non-sectarian basis.

The Army and Navy Committee of the Board (Walter Rothschild, Chairman) services men and women of Jewish faith in the Army and Navy in relation to their religious and welfare needs. This committee is composed largely of representatives of the 38 national Jewish organizations which are affiliated with it. There are more than 630 local Army and Navy Committees in the United States as well as overseas, through which communities cooperate in providing welfare activities for men and women in the armed forces. The Committee on Army and Navy Religious Activities (Rev. Dr. David de Sola Pool, Chairman) selects and endorses rabbis to serve as chaplains in the Army and Navy and prepares the devotional literature distributed to Jewish personnel in the forces. Other committees in the Army and Navy Division include Personal Service and the Bureau of War Records. A National Veterans' Service Committee, in association with the Jewish War Veterans of the United States and other national bodies, serves the needs of hospitalized and able-bodied veterans. The Board is an accredited agency of the Veterans' Administration and has been serving veterans since World War I.

The Women's Division (Mrs. Alfred R. Bachrach, Chairman) coordinates the efforts of national and local women's groups in behalf of the program of service to men and women in uniform and civilian war efforts.

The officers of the Board are: Frank L. Weil, President; Mrs. Alfred R. Bachrach, Lt. Col. Lloyd W. Dinkelspiel, Irving Edison, Mrs. Walter E. Heller, Carl M. Loeb, Jr., Donald Oberdorfer, Walter Rothschild, and Mrs. Felix M. Warburg, Vice-Presidents; Max Wilner, Treasurer; Merwin R. Haskel, Assistant Treasurer; Joseph Rosenzweig, Secretary; Ralph K. Guinzburg, Assistant Secretary; and Louis Kraft, Executive Director.

The headquarters are at 145 East 32 Street, New York 16, New York.

JEWIS AND JUDAISM. With the coming of victory for the United Nations, the Jews of the world concluded one of the darkest periods in their long history. According to estimates, the total world population had fallen to under 10,000,000, due to the unprecedented extermination by the Nazis of over 6,000,000 European Jews. It appears at the close of 1945 that of a prewar population of six millions in continental Europe, outside the Soviet Union, only about 1,250,000 remain. At least 100,000 of them were still in "Displaced Persons" camps eight months after V-E Day.

The condition of these Jews was studied by Earl G. Harrison, American member of the Inter-Governmental Committee on Refugees, at the request of President Harry S. Truman in a letter dated June 22, 1945. Harrison reported that many

displaced Jews were living in crowded, unsanitary concentration camps, and suffering from malnutrition. "Most Jews," he wrote, "want to leave Germany and Austria as soon as possible. . . . They want to be evacuated. . . . Palestine, while clearly the choice of most, is not the only named place of possible emigration." Mr. Harrison urged that a plan, submitted by the Jewish Agency of Palestine to the British Government, be sponsored by President Truman, calling for the immediate issuance of 100,000 additional immigration certificates for Jews. For those who wished to return to their original homes, he urged special aid. He also pleaded that "the United States, should, under existing immigration laws, permit reasonable numbers of . . . persons to come here . . ."

President Truman acted upon Harrison's recommendations. First, he wrote to Gen. Eisenhower, ordering that living conditions in the Displaced Persons camps be improved. He also wrote to Prime Minister Clement R. Attlee of Great Britain requesting that action be taken by the British to admit 100,000 Jews to Palestine. On Oct. 18, the President announced that the British had rejected the proposal, and on the same day, Secretary of State Byrnes published a letter, written by the late President Roosevelt to King Ibn Saud, of Saudi Arabia, dated April 5, 1945, in which the late President assured Ibn Saud that "no decision (would) be taken with respect to the basic situation in that country (Palestine) without full consultation with both Arabs and Jews." Byrnes announced, at the same time, that the Truman administration would follow the Roosevelt policy. This announcement was intended, no doubt, to prepare the American public for the plan, announced Nov. 13, to set up a Joint Anglo-American Committee of Inquiry whose functions would be to: 1) examine conditions in Palestine bearing on the problem of Jewish immigration and settlement there; 2) estimate how many Jews want to migrate to Palestine or other countries outside Europe; 3) make recommendations for a temporary and permanent solution of the two foregoing problems; 4) recommend aid for the Jews in Europe, "by remedial action in the European countries in question" or by immigration to countries outside Europe. In the meantime, the British Foreign Secretary, Ernest Bevin, announced that 1,500 immigration certificates per month would be issued.

These decisions, following upon the Harrison report and President Truman's request for 100,000 certificates, were a severe blow to Zionists and Zionist sympathizers everywhere. Protests against the setting up of the Joint Commission were issued from many Jewish communities, but in Palestine, even before Nov. 13, the Jews had been preparing to take action against the White Paper. (The White Paper on Palestine was issued in May, 1939, by the Secretary of State for the Colonies. In brief, it called for "the establishment within ten years of an independent Palestine State . . .": "Jewish immigration during the next five years (to) be at a rate which, if economic absorptive capacity permits, will bring the Jewish population up to approximately one-third of the total population of the country . . . some 75,000 immigrants over the next five years; the High Commissioner will be given general powers to prohibit and regulate transfers of land.")

On Oct. 2, the Histadruth (Federation of Jewish Workers) announced that it would bring immigrants into the country "by all ways and means." On Oct. 8, thousands of Jews took part in a general strike in protest against British policy. A re-

sistance movement was organized; a secret radio station began broadcasting, as "the Voice of Israel." On Oct. 31, a planned attack on Palestine's railroads resulted in several deaths. The Jewish Agency officially repudiated this attack, but warned: "(It) finds its capacity to impose restraint severely tried by the maintenance of a policy which Jews regard as fatal to their future."

The mood of Palestine Jewry is best understood in the light of the figures of Jewish decimation in European countries during the Nazi regime and in the light of restrictions on emigration to other countries. According to estimates, the surviving Jews in Germany (mainly deportees from other European countries), amounted to 275,000. In Austria, only 2,000 remain of original Austrian Jewry. In Belgium out of a prewar Jewish population of about 90,000, only some 20,000 have been found, of whom 6,000 were German and Austrian and 8,000 Polish. In the Netherlands, there were an estimated 25,000 Jews, out of some 180,000 before May, 1940; and of these, some 5,000 were refugees. Of 2,900 Jews in Luxembourg, only 400 have been found. In Poland, within barely two years, some 1,800,000 Jews were murdered by the Nazis in death camps or died of torture and starvation. In July, 1945, an official estimate was made of 80,000 surviving Polish Jews. In Soviet territories, between 200,000-250,000 more are assumed to be residing. In Czechoslovakia, no more than 15,000 are alive. In Hungary, of 800,000 Jews, about 280,000 survive. Of the original Jewish population of Rumania of 850,000, some 280,000-300,000 are accounted for. In Yugoslavia, of a prewar total of 80,000 there may be a maximum of 12,000 Jews. In Greece, of a prewar total of 85,000, about 18,000 Jews have been found alive.

The condition of the surviving remnants is precarious. In Poland, for example, by midsummer of 1945, almost 150 Jews had been massacred in pogroms. Since that time there has been a steady flow of Polish Jews into the American zone of occupation, due to violent anti-Semitism among the Poles. While the Nuremberg laws have been revoked in the liberated countries, Jews find it almost impossible to retrieve property stolen by the Nazis. Anti-Semitism, inculcated by the Nazis, is not easily eradicated.

Palestinian Jewry continued to develop during the war years. The present Jewish population is about 650,000. Since 1939, food output has risen 40-45 per cent. Industry has grown, so that in Tel Aviv, for example, the budget for 1945-1956 has reached £588,000. The Jewish National Fund increased its holdings to 704,859 dunams (each dunam is $\frac{1}{4}$ acre). The Jewish Brigade served well with the British forces in Italy.

The largest and strongest Jewish community in the world continued to be the American, with a population of nearly 5,000,000. In 1944, American Jewry provided \$17,500,000 for Palestine, \$20,000,000 for European relief, rehabilitation, and rescue. For health, cultural, and religious services \$6,200,000 were spent, in addition to local budgets of \$19,500,000. Over 500,000 Jewish men and women served in the armed forces; 35,000 were casualties; 8,200 died, or received awards for valor.

At the San Francisco Conference Jewish organizations were active among the consultants. The work for the inclusion in the World Charter of an International Bill of Rights was led by the American Jewish Committee and the American Jewish Conference.

The influence of Nazi theories of anti-Semitism had their effects in the United States too. The

American Nationalist Party, the Ku Klux Klan, and other anti-Semitic groups became active in the early part of the year, revealing a heightening of tensions. Recent studies of attitudes toward minority groups in America show a general increase of antagonistic feeling. Efforts to combat anti-Semitism have also broadened. Government, labor, industrial, educational, women's, and religious groups have inaugurated programs for curbing intolerance. In New York State, the Ives-Quinn Bill went into effect July 1, 1945, providing for a permanent five-member commission with full enforcement power to prevent racial and religious discrimination in employment. Similar state laws have been passed by New Jersey, Indiana, and Utah.

With the destruction of virtually all the traditional centers of Jewish culture in Europe, American Jewry prepares to make of the United States the main cultural center of the diaspora. The leading theological seminaries have laid plans for expanding their scope to include, besides the training of rabbis and teachers, the preparation of social workers, administrators, musicians, artists, and writers. Educational activities also developed. It was estimated that over 200,000 children were enrolled in all types of Jewish schools during 1944. A recent poll conducted by Elmo Roper revealed that events throughout the world had stimulated Zionist sympathies among American Jews. According to the poll, 80.1 per cent of those asked favored a Jewish state; 10.5 were opposed, while 9.4 were undecided.

The presence of such a vast number of Jewish men and women in the armed forces, and the fact that European schools and libraries had been destroyed, laid a heavy responsibility upon American Jewish organizations to provide cultural and religious guidance to the Jewish service personnel. The National Jewish Welfare Board, in cooperation with many groups, distributed during 1944 152,000 Bibles, 377,000 prayer books, 513,000 Jewish calendars, and 1,060,000 pamphlets and books of Jewish interest, covering a wide range of topics from religion and history to postwar problems.

American Jewry must not only be called upon to provide relief for Jewries abroad, but also to maintain standards of religious and cultural life; and to guarantee that refugees coming to these shores will not become a charge upon the community. The closing week of 1945 witnessed the issuance of a directive by President Truman, admitting refugees to the United States to the full extent of the immigration laws. "Responsible welfare organizations," he announced, "now at work in this field, will guarantee that these children will not become public charges." A large percentage of those expected will be Jews. For this purpose, the National Refugee Service, organized in 1939, will have to expand its activities.

Latin American Jewry has begun to play a more important role in world Jewry since the European centers were liquidated. Although the total Jewish population in South and Central America number little over 500,000, the Jewish communities are becoming more aware of their future role. The possibility of building strong Jewish communities is brighter since the Inter-American Conference held in Mexico City in March, 1945, when a resolution against racial and religious discrimination was passed. The resolution reads in part: "Be it resolved, 1) to affirm the principle recognized by all the American states of equality of rights and opportunities for all men, regardless of race and

religion; 2) to recommend to the Governments of the American Republics that, without prejudicing the freedom of the spoken or written word, they make in their respective countries every effort to prevent all acts which tend to provoke discrimination between individuals by reason of their race or religion." Recent events in Argentina, inspired by the followers of Peron, have violated the spirit and letter of the resolution. Whether the will of the Peronists will prevail against the Inter-American resolution, remains to be seen.

IRA EISENSTEIN.

JOHNSTON ISLAND. An atoll in the central Pacific, 809 air miles southwest of Honolulu, belonging to the United States. Useful as an advance observation post in the Hawaiian defense system, it is under the jurisdiction of the U.S. Navy Dept. With funds appropriated by Congress in 1939 and 1941, the atoll was converted into a naval base for aircraft and submarines. On May 15, 1941, the island was designated a "naval defensive sea area" and on Aug. 15, 1941, the naval air station was commissioned. During World War II the island remained under the control of U.S. armed forces.

JOINT BRAZIL-UNITED STATES DEFENSE COMMISSION. A Commission composed of military delegates (Army, Navy, and Air Forces) of the two countries, established in August, 1942. Meetings are held in Washington for the purpose of making staff plans for the mutual defense of the Western Hemisphere. U.S. Chairman: Maj. Gen. J. G. Ord.

JOINT CHIEFS OF STAFF, U.S. Under the direction of the President, the Joint Chiefs of Staff consult together on matters of joint concern to the armed forces, advise the President as to their use, and take appropriate action to implement his plans and policies as Commander in Chief of the Army and Navy. The Joint Chiefs of Staff comprise the United States membership of the Combined Chiefs of Staff (q.v.).

Office of Strategic Services (OSS) On June 13, 1942, the Office of Strategic Services, formerly the Office of Coordinator of Information, was placed under the jurisdiction of the Joint United States Chiefs of Staff. The Office was terminated October 1, 1945. Some of its functions were transferred to an Interim Research and Intelligence Service, and the rest were assigned to the War Department.

Army and Navy Staff College. The Army and Navy Staff College was established pursuant to a directive issued by the Joint Chiefs of Staff on April 23, 1943. Officially opened on August 5, 1943, the College operates under the direction of the Joint Chiefs of Staff. It provides a special course of instruction for specially selected and qualified Army, Navy, and Marine Corps officers in order to increase efficiency in the performance of command and staff duties in unified and coordinated operations of the Army and Navy forces. Commandant: Lt. Gen. John L. DeWitt.

JOINT MEXICAN-UNITED STATES DEFENSE COMMISSION. A Commission organized Jan. 12, 1942, to study problems relating to the common defense of the United States and Mexico, to consider broad plans for the defense of Mexico and adjacent areas of the United States, and to propose to the respective governments cooperative measures. U.S. Chairman, Vice Adm. David W. Bagley.

JOINT PATENT INTERCHANGE COMMITTEE, British-American. A Committee created pursuant to the British-

American Patent Interchange Agreement signed Aug. 24, 1942. The Agreement has for its purpose facilitating the interchange of patent rights, inventions, technical information, designs, and processes between the two governments under the lend-lease and mutual-aid programs. The Committee meets jointly as well as in its American and British sections. Problems pertaining to both governments are finally resolved by the Joint Committee and appropriate recommendations are made to the proper authorities of both governments.

American chairman: Justice Harold M. Stephens. British chairman: Sir Henry Self.

JOINT WAR PRODUCTION COMMITTEE—United States and Canada. The Joint War (originally, Defense) Production Committee of Canada and the United States was established on Nov. 5, 1941, by the President of the United States and the Prime Minister of Canada, to coordinate the capacities of the two countries for the production of war materiel. The Committee has in the main functioned through the organization of 10 joint technical subcommittees composed chiefly, on the Canadian side, of Government production executives and, on the United States side, of War Production Board officials and procurement officers from the armed services. These 10 joint technical subcommittees are: Tank-Automotive, Artillery, Artillery Ammunition, Small Arms and Small Arms Ammunition, Chemicals and Explosives, Signal Corps Equipment, Conservation, Aircraft, Naval Shipbuilding, and Merchant Shipbuilding. Chairmen: U.S. Section, William L. Batt; Canadian Section, H. J. Carmichael.

JUILLIARD MUSICAL FOUNDATION. A foundation incorporated in New York State in 1920, in accordance with the will of Augustus D. Juilliard, to aid worthy students of music, promote the instruction of the general public in the musical arts, and to encourage a deeper interest in music in the United States. Invested trust funds had a book value of about \$12,000,000 in 1945; only the income is distributed. Secretary: M. Steilen, 31 Nassau Street, New York City, 5.

JUSTICE, U.S. Department of. A Department of the U.S. Government which in 1945 had the following divisions and offices.

Office of the Attorney General
Office of the Solicitor General
Office of the Pardon Attorney
Antitrust Division (q.v.)
Tax Division
Claims Division
Lands Division
Criminal Division
Customs Division
War Division
Administrative Division
Federal Bureau of Investigation (q.v.)
Bureau of Prisons
Immigration and Naturalization Service
Board of Parole
Board of Immigration Appeals

Attorney General in 1945: Thomas C. Clark. Solicitor General: Charles Fahy.

JUVENILE DELINQUENCY. The last 4 months of 1945 were without combat for the armed forces of the United States, but many of the same conditions persisted for children that had unsettled their lives and had caused some of them to become "delinquent." Large numbers of fathers were still absent from home; the uncertainty of mothers about when fathers would return was substituted for apprehension about their physical safety. Overcrowded living and school conditions continued, as well as

laxity of supervision, because mothers were still working and had no satisfactory place to leave their children during working hours. When war ended some families pulled up stakes in the swollen communities of production for war and, without a place to live, turned toward their former homes or to new communities, just when the makeshift shelters had begun to feel like home to the younger children. Undesirable commercial entertainment places still operated around the crowded boom towns to attract the older children in the absence of wholesome recreation facilities. Moreover, the general spirit of excitement and adventure aroused by war was present throughout the year, creating in some children restlessness, defiance of authority, and aggressive behavior, and leading them to commit specific acts that are regarded as delinquency.

But the same encouraging fact held true through this year as through other war years, that most children took the confusion, hardships, and deprivations well. In spite of the spectacular misbehavior of some of teen age the majority conducted themselves admirably.

Extent of Delinquency. The extent of juvenile delinquency, and especially the question of its increase, is still a live subject in newspapers and magazines, but is impossible to gage on a nationwide scale. Few communities have an accurate statistical picture of the misbehavior of their children. Only children brought into court or dealt with by the police can well be counted, but scores of others commit the same "delinquencies" without being apprehended, and others have their misconduct handled by parents, relatives, friends or social agencies. The police commonly try to avoid "giving a child a record," by not reporting for juvenile-court action delinquencies considered not serious.

The most comprehensive figures on this subject are those reported yearly by juvenile courts to the Children's Bureau in a series begun in 1927. Even these figures have well recognized limitations, which the Bureau is attempting to lessen.

These figures show an upward swing in the number of cases disposed of in 1940-44 by 81 of these courts that serve areas of 100,000 or more population—an increase of 44 percent in total cases, 39 in boys' cases and 67 in girls' cases. Conditions in the expanding war-affected areas were attended by an increase in juvenile-delinquency cases disposed of by courts that was more marked than in other areas. In 38 courts located in areas of increasing population the increase was 46 percent, whereas in 43 courts in areas of declining population the increase was 40 percent from 1940 to 1944.

During 1944, 118,626 delinquency cases were disposed of by 380 juvenile courts that served areas representing about two-fifths of the total population of the United States. Of these, 95,827 were boys' cases and 22,799 girls'.

The greatest concentration of children referred to court was in the 14 to 16 age group. The ages when referred to court were reported in 87,450 of the boys' cases and 20,913 of the girls'. Of these, 85 percent of the boys' cases and 48 percent of the girls' involved children in the 14 to 16 age group. In 4 percent the child was under 10.

The reasons for reference to court were reported in 88,027 of the boys' cases and in 21,041 of the girls'. Of the boys "stealing," with 40 percent, ranked first in the reasons for reference; "acts of carelessness or mischief," 20 percent, was next. Sixty percent of the girls' cases were referred to court for "being ungovernable," "running away," or

"sex offenses." These three reasons must be considered together, because ungovernable behavior and running away frequently involve sex offenses, also some courts use the term "ungovernable behavior" to avoid recording a sex offense.

The types of disposition were reported in 109,745 of the total cases disposed of by these 380 courts in 1944. Of these, 44 percent were dismissed, adjusted, or held open without further action; in 32 percent, the child was referred to the probation office for supervision, and in 9 percent, the child was committed or referred to an institution.

Proposals for Action. Because juvenile delinquency results from many causes, including breakdown in home life and in community safeguards and services to children, it can be attacked only through a wide range of measures based on the needs of all children and young people. Its control requires action of individual parents, the school, the church, and local social and civic agencies. Moreover, the State and Federal Governments have an important role to play in providing information, guidance and, when necessary, financial assistance.

Of significance in presenting a nation-wide program that focuses on the total needs of children, is a publication issued in April 1945 by the Children's Bureau, *Building the Future for Children and Youth*. It presents proposals for action made by the National Commission on Children in Wartime.

To achieve social and health services of high quality for all as a public responsibility, the Commission urges that Federal and State funds be appropriated in sufficient amounts so that each State may reach certain goals in 10 years. This means the expansion of existing services for maternal and child health, for crippled children, and for child-welfare services under the Social Security Act. Of these three services the last is of greatest importance to the prevention of delinquency among children.

The action proposed is the granting of Federal funds to States for extending and improving child-welfare services in amounts sufficient to make possible State-wide coverage within 10 years, so that "each State is able to assure to children in all its political subdivisions, urban and rural, access to the services of workers trained to deal with the problems of children who have special needs." The Commission recommends also that programs administered by the Social Security Board having to do with the support of children, that is, insurance and public assistance, be extended and improved, and that grants of Federal funds be made to States to share the cost of assistance for needy families not now eligible for other types of public assistance. In addition, the Commission urges Federal aid for education so that full opportunity may be assured to all children and youth, and recommends the strengthening of Federal child-labor legislation to cover current gaps in the protection of child workers. Proposals for State action also include a 16-year minimum age for employment and safeguards for adoption. The Commission proposed for immediate study a correlated mental-hygiene program; guardianship of children; leisure-time services; and a comprehensive program.

The need for services for various special groups is mentioned, for example: "Community resources for mentally deficient children are grossly inadequate everywhere . . . The cost to society of neglecting the needs of mentally deficient children is high, not only because large numbers of

children who might be fitted for community life by special training fail to receive it, but also because mental deficiency looms large in the problem of juvenile delinquency."

Community Interest. An encouraging factor was a growing awareness on the part of adults of conditions that lead to delinquency and an interest in methods for its prevention and treatment. This interest has not been confined to those with responsibility in this field, such as judges of juvenile courts, police, child-welfare workers in publicly and privately supported agencies; it has been shown by workers in related fields and by civic groups. As a result the subject has been widely discussed, efforts have been made to improve the practices of existing agencies, projects have been developed, and activities coordinated. Some of the projects and attempts at coordination have been sound but some have been potentially harmful to the families and children they were intended to serve. For example, some emphasized punishment of parents whose children are delinquent rather than the need of these parents for help in meeting family situations in which delinquent behavior often has its roots, and in dealing wisely with children's problems before they become serious. Efforts being made to develop "schools" for parents of delinquent children are effective or futile according to the caliber of leadership and to what is taught. Some civic groups are attempting to develop "courts" or councils staffed by lay persons to hear cases and recommend treatment. Such a procedure may be dangerous because it takes on, without proper authority, judicial functions and undertakes treatment that only qualified workers should give. Nevertheless, awareness of the problem and the desire to do something about it are constructive.

More than usual attention has been focused on the conditions under which children are detained pending the disposition of their cases. The report of the National Commission on Children in Wartime, *Building the Future for Children and Youth*, says: "Large numbers of children are held in jails where they are confined with adult offenders and subjected to conditions that threaten their health and well-being. Although many States have laws prohibiting the detention of children in jail, lack of suitable detention facilities for children in many communities results in the use of jails for this purpose, even in some instances where the children are held for reasons other than delinquency. Many of these children are very young. In one State 500 children under 16 were detained in jail during a recent year, 84 of them being under 12 years of age. The records of two rural counties in another State showed 66 children under 16 detained in jail during the last 6 months of 1943 in one and 55 during the last 4 months of 1943 in the other. Children in jail seldom have access to . . . any of the things children need, even suitable food, yet their stay is sometimes prolonged for weeks and months."

One group of young delinquents that increased in many communities during the war is greatly affected by the quality of detention quarters. They are boys and girls who run away from home to seek adventure, or to escape from some situation in their families or home communities that has made them unhappy. Many of them are as young as 12, some even younger. About 9,700 were dealt with in 1944 by 380 juvenile courts, although this number includes children who did not leave their own cities. The number does not include, however, children dealt with by the police and social agencies

without reference to court. Most communities have no suitable places for these children while plans are being made for them, and either lodge them in jail, although no charges may have been made against them, or encourage them to move on.

Instead of this unintelligent response to their plight, these children should have resourceful help. Their situations call for social services in the community in which the child is found and also in his home community. Many of these young people are confused and fearful. They need help from a person who can win their confidence and give them reassurance. This help should be given by social workers who have an understanding of the behavior of children and adolescents and who have experience in dealing with them. The parents of the child also need help in planning for his return, if that is the plan decided on. Supervision may be needed by the child or his family after his return if he is to make a good adjustment. Social services may also play an important part in safeguarding a child from return to an unfit home. Sometimes children have run away from situations or conditions that involve cruelty on the part of parents, including physical abuse, as well as from conditions less tangible but nevertheless serious. To add to this flight from unhappiness detention in jail, possibly with adult offenders, is to give a child a most disturbing experience.

The Children's Bureau has become particularly aware of an awakening interest in this problem. An increasing number of requests were received during the year for information about approved practices, building plans, use of foster homes for detention, and the relative costs of various methods of care. Many communities reported to the Bureau their concerted efforts to study the problem and take action on it, and several States reported action at the State level, which is a new approach to this particular type of care. In addition, the National Probation Association has under way a study of types of detention care and practice in selected communities.

Role of the Child-Welfare Worker. Hundreds of thousands of children in the United States are living under conditions that prevent their full growth and development and deprive them of the opportunities and advantages that help them to become good citizens. Many children cannot be cared for in their own homes or are cared for inadequately there because of the absence of one parent or both, or because of incompetency of the parents that results in neglect or in constant family discord. Individual difficulties or physical or emotional handicaps create problems of adjustment in school and in play. Some children overcome all the obstacles to wholesome development that are in their paths, and grow into adults adjusted to hold their own. Others break in some way at some time for lack of a secure home life, affection and appreciation from their parents, and constructive recreational activities. From their number come many of the children labelled as "delinquent."

The child-welfare worker is in the community to help prevent these breakdowns and the necessity for authoritative action, to open doors of what opportunity is offered by the community to its children, and to encourage the creation of new advantages for them. This, in brief, is her approach to the prevention and control of juvenile delinquency. If a child needs care away from his own home, the child-welfare worker may assist in finding a foster home that is suitable and as much like a home of his own as possible.

If child-welfare workers are to safeguard chil-

dren and promote their interests, they must be easily available to parents and children where they live, which means throughout each State and to each community. As of June 30, 1945, more than half of the 1,971 workers, paid from Federal, State, and local funds providing service to children on a full-time basis, were located in 8 States. The uneven geographical distribution appears more strikingly on a county basis. More than two-fifths (43 percent) of the 1,971 full-time workers were employed in 61 counties containing cities of 100,000 or more. The lack of child-welfare staffs in large sections of the nation is further indicated by the fact that in only 504, or 16 percent, of the 3,100 counties were there one or more full-time child-welfare workers. In other counties, services were known to be available under other arrangements, that is, from workers responsible for serving several counties, or were not available at all. Limited funds are not the only obstacle to making these services country-wide; the shortage of qualified workers for local positions is still serious.

State Planning. Other proposals of the National Commission on Children in Wartime are for the development of social planning in the States by a council or commission on children and youth. This body should be a part of the State planning board, if such organization is appropriate, or a separate body appointed by the Governor and directed to perform the functions he may prescribe. Its functions, in general, would be to "provide a center of information on children and youth and to promote action in their behalf," its work supplemented by citizens' organizations that study its recommendations and give their support to those they approve. The council should be equipped to ascertain the facts by encouraging sound research by State departments and agencies and by correlating the results of this and other authoritative research; to review legislation; to appraise services; to consult with all agencies and groups concerned with or about services to children; to formulate proposals; to report findings to the public; and to encourage and foster local community planning and action. For this local planning the Commission gives detailed suggestions based on the experience of local groups.

State planning and coordination of services to children provide an essential approach to the problem of delinquency—for which there is no quick, sudden, or dramatic solution. Only through development of a program unifying the forces that spell security and opportunity for all children and young people is it possible to deal with the matter successfully.

KATHARINE F. LENROOT.

KARAFUTO. The Japanese part (south of 50° N.) of Sakhalin island; occupied and taken over by the U.S.S.R. following the defeat of Japan by the Allies in 1945. Area, 13,935 square miles. Population (census of October, 1940), 414,891. Chief towns (Jan. 1, 1938, populations): Toyohara, the capital, 37,365; Esutoru, 31,959; Shikka, 24,399; Otomari, 24,269. Chief products: paper, fish, coal, and petroleum.

KELLOGG FOUNDATION. A foundation established by W. K. Kellogg in 1930 to advance the well-being of children without regard to race, creed, or geographical boundary. Expenditures for year ended Aug. 31, 1945, were \$1,803,962.61. Total capital assets on that date were \$46,927,165.94.

The Foundation has undertaken and administers the Michigan Community Health Project,

a health program involving seven counties in southwestern Michigan. The present program includes also national and international health promotion activities and the granting of fellowships. President and General Director: Emory W. Morris. Headquarters: Battle Creek, Mich.

KINGMAN REEF. An atoll in the Pacific Ocean 1,067 miles southwest of Honolulu, Hawaii, owned by the United States. The reef is about eight miles long and the lagoon five miles wide, but only a small area of land remains uncovered at high tide. The Navy Department has jurisdiction over the atoll. Its strategic importance is due to its being the only seaplane base located between Honolulu (1,067 miles to the north) and Pago Pago (1,797 miles to the southwest).

KOREA (Chosen). A country between the Yellow Sea and the Eastern Sea in eastern Asia, annexed by Japan on Aug. 22, 1910; incorporated as an integral part of the Japanese empire from 1919 until September, 1945, when Japan surrendered the country to Allied armed forces.

Area and Population. Area, 85,246 square miles. Population, 24,326,327 at census of Oct. 1, 1940. The racial division of the population on Jan. 1, 1939, was: Koreans, 21,950,716; Japanese, 633,320; foreigners (mostly Chinese), 94,815. Chief cities: Seoul (Keijo), the capital, 935,464 inhabitants in 1940; Pyongyang (Heijo), 285,965; Pusan (Fusan), 249,734; Taegu (Taikyū), 110,866; Inchon (Jinsen), 102,473. The Koreans have their own spoken and written language.

Education and Religion. About 60 per cent of all adults were illiterate. There are many modern schools. At Seoul (Keijo) there is a university. The chief religions are Confucianism, Buddhism, Shintoism, and Christianity.

Production. Over three-fourths of the working population is engaged in agriculture and forestry. About one-fourth of the cultivated area is devoted to rice. Other crops include barley, millet, soybeans, rye, wheat, cotton, and apples. Silkworm rearing is an important occupation. Livestock (1939): 1,705,000 cattle, 1,400,000 pigs, 51,000 horses, 20,000 sheep. The important minerals produced are gold, iron, coal, and graphite. Mica, molybdenum, and wolfram, are found.

The chief industries are cotton spinning, and rayon weaving. Other manufactured products are fertilizers, cement, chemicals, paper, saké, pottery, flour, electric bulbs, and enamelled ironwares.

Foreign Trade. Korea's merchandise trade with other parts of the Japanese Empire during the first 10 months of 1940 was: imports, 1,121,900,000 yen; exports, 614,100,000 yen. Merchandise trade with foreign countries during the first nine months of 1940 was: imports, 168,200,000 yen; exports, 150,700,000 yen. The chief exports are rice, fertilizer, crude copper containing gold and silver, raw silk, and soybeans.

Finance. Budget estimates for the fiscal year ended Mar. 31, 1942, balanced at 1,012,577,000 yen. The public debt on Mar. 31, 1938, was 593,546,214 yen. The yen exchanged at \$0.2596 in 1939, \$0.2344 in 1940 and 1941 (first 7 months).

Transportation. Railways extended about 3,345 miles on Jan. 1, 1941 (state lines, 2,469; private, 876). Highways extended 19,048 miles in 1940. Airlines linked Keijo with the other chief cities of Korea, Japan, Manchukuo, and North China. Shipping entering the open ports in 1938 totaled 14,677,742 tons.

Government. Under Japanese occupation, the

country was ruled by a Governor-General appointed by the Emperor of Japan until October, 1942, when it was unified with that of Japan proper and placed under the jurisdiction of the Japanese Home Minister. A Korean "provisional government" and "restoration army" were established in Chungking in 1940. The joint communiqué issued Dec. 1, 1943, following the Cairo Conference of President Roosevelt, Prime Minister Churchill, and Gen. Chiang Kai-shek, declared that the United States, Britain, and China "mindful of the enslavement of the people of Korea, are determined that in due course Korea shall become free and independent."

Events, 1945. The problem of reestablishing Korea as an independent democratic state received the attention of the "Big Three" at the conference held in Moscow on Dec. 27. The report recommended the "earliest possible liquidation of the disastrous results of protracted Japanese occupation." The conference authorized the setting up of a provisional Korean democratic government "which shall take all necessary steps for developing the industry, transport and agriculture of Korea and the national culture of the Korean people."

In order to carry out the provision for establishing a provisional Korean Government, "there shall be established a joint commission consisting of representatives of the United States Command in southern Korea and the Soviet Command in northern Korea."

(Korea is divided along the 38th parallel, with the American Army in control in the southern part and the Soviet Army in control of the northern part.)

In carrying out this program the Joint American-Russian Commission was authorized to consult with the Korean democratic parties and social organization, according to the Moscow report, which stated that the recommendation worked out "shall be submitted to the governments of the U.S.A. and the U.S.S.R., the United Kingdom and the Republic of China prior to final decision by the two governments represented on the Joint Commission." Continuing it stated,

"It shall be the duty of the Joint Commission—with the participation of the provisional Korean democratic government and Korean democratic organizations to work out measures for helping and assisting (trusteeship) the political, economic and social progress of the Korean people, the development of democratic self-government and establishment of Korean national independence."

The proposals of the Joint Commission (American-Russian) shall be submitted—following consultation with the Provisional Korean Government—for the joint consideration of the Governments of the U.S.A., the U.S.S.R., United Kingdom and China, "for the working out of an agreement concerning a four-power trusteeship of Korea for a period up to five years."

In order to carry out the foregoing recommendation the Moscow Conference ordered a conference of representatives of the American and Russian Commands "within two weeks." Heretofore there had been no communication whatever between the two military groups and while Soviet consular representatives are stationed at Seoul, the capital, which is in the American zone, no American consular or other officials or American newspaper correspondents were permitted within the Russian zone. No communication or travel was permitted between the two zones, which was responsible for serious misunderstanding and distress on the part of the people, because all supplies of coal are in the Russian zone in the north, while practically all

rice is produced in the southern part controlled by the Americans.

Korea Discussed at Cairo and Yalta. While the complete discussions concerning the disposition of Korea have not been published, the announcement of the Moscow Conference, providing for a 5-year trusteeship, created serious complications with the Koreans who staged numerous meetings of protest (in the American zone) and there was considerable rioting and some stones were thrown at American soldiers. Korean leaders asserted that the splitting of their country by the Americans and the Russians "had divided three of Korea's thirteen provinces with the governors of the three provinces coming under the jurisdiction of both the American and Russian administrations—and there is little similarity between the two administrations and virtually no liaison," said the Korean spokesman. The Koreans, according to a *United Press* dispatch from Seoul on Sept. 19, declared the "major crime" of the Allied set-up was that the Allies had "broken faith with small countries in the Far East." With respect to Korea, the Cairo Conference had adopted a resolution declaring that Korea "would become free and independent in due course." The bisecting of the country would hinder independence and prevent the integration of the country. The Koreans demanded that the Japanese-built industrial empire in Korea be turned over to the Koreans "in payment for the years when the Japanese bled the wealth of the country."

The Korean spokesman then made the significant declaration that the withdrawal of the American and Russian armies might be followed by the creation of two governments in Korea, one Communist fostered by the Russians and the other democratic fostered by the Americans.

The Koreans pointed out that the Russians in north Korea controlled virtually all of Korea's hydro-electric power, heavy industry, coal and iron, while the southern part of the peninsula produced most of the rice, fish, and other foods. Americans admitted that in order to obtain supplies of coal it was necessary for them to ship coal from Japan, because the Russians in northern Korea "even refused to discuss the subject."

MacArthur Also Critical. In his report on the Military Government in Japan and Korea on Jan. 2, 1946, Gen. Douglas MacArthur also referred to the complications in Korea and urged an early conference on the part of the Americans and Russians. He declared there was "confusion everywhere in the entire economic, political and social structure of the country." The lack of qualified Korean administrators left the Allies with only two alternative courses, (1) continue the foreign military administration with Korean advisers, or (2) continue the Japanese administration. He said that up to the present the Koreans had developed only two definite opinions—hatred of the Japanese and the desire for independence.

Gen. MacArthur said that at a recent gathering of 1,200 Koreans, (Oct. 24, 1945) there were fifty-four political parties represented which were registered with the Military Government. "The aims of many of these parties were vague and obscure and only had a few dozen followers," he said. The only common desire apparently was to "seize Japanese property, expel the Japanese, and establish independence and self-rule immediately."

Two Leading Groups. Chief political contenders for the right to rule Korea were the "Korean People's Republic (radical)" and the Korean Democratic Party (conservative). Both sides claimed the two popular and outstanding leaders, Kim Koo and

Sigman Rea. According to Gen. MacArthur's report the "Korean's People's Republican Party was most active and articulate and had adopted a platform calling for changes in land-ownership, speedy expulsion of Japanese and collaborators, higher wages and stable prices." He said the radicals generally praised the Russians and denounced the Americans, while the conservatives praised the Americans and denounced the Russians.

Gen. MacArthur referred to the economic complications caused by the "long holiday" which practically all Korean workers took immediately after the Japanese capitulation. There were further complications due to the return to Korea of thousands of "slave laborers" from Japan. With reference to the problems of repatriation MacArthur's report stated there were about 2,000,000 Koreans in Japan, including 350,000 contract or requisitioned laborers. About 160,000 had been repatriated by Oct. 31 and within the same period about 110,000 Japanese soldiers and sailors had been sent back to Japan. Of the 700,000 Japanese civilians in Korea, some 71,000 had been sent home by Oct. 25.

Hodge's Report. The American commander in Korea, Lt. Gen. John R. Hodge, reported on Jan. 2 that he had opened negotiations with the Soviet Consulate in Seoul to arrange a meeting with the Russian commander in northern Korea in order to carry out the instructions of the Moscow Conference. Gen. Hodge said that the latest and most significant political development was a reported offer of the leftist Korean People's Republic to merge with the Provisional Government and offer the resultant coalition to the Allies as a "provisional government" for which the Moscow Big Three Conference had called.

A further important development was a call issued by Kim Koo of the Provisional Government and David Um, Information Minister to all Koreans to conclude their 4-day celebration and go back to work, end strikes, and cooperate with the American Military Government. According to a report by the *United Press* there was hope in Seoul that a definite program for the creation of an independent Korean administration might result from the Moscow action. There was a further reference to the Cairo Declaration that Korea "was to be permitted to choose its form of government by a national plebiscite and this was to be accomplished by grouping all of the political factions behind the two major groups. It was said the American position was "that Korea had been promised its independence at the Cairo Conference (Roosevelt, Churchill and Chiang Kai-shek) and that the United States would not recognize any group as a legal government pending the plebiscite."

There was a feeling, however, in American circles that the Korean Provisional Government was entitled to chief consideration because it had been organized originally at Seoul in 1919 and since had existed in exile in China and had received the recognition of China and France.

It was explained that in the Russian administered area the Soviet authorities had turned over much of the local administration to the so-called "Korean Committee of Liberation." Within the American zone it was reputed that forty-three political groups had decided to unite under the leadership of Kim Koo of the Provisional Government. Another minority group calling itself the "people's republic" had been ordered dissolved.

Considerable uncertainty existed because of the failure up to the present to publish the discussions concerning the future of Korea which took place

at the Yalta Conference, where it was alleged Stalin had taken a strong stand for Russia's dominant position in any future Korean Government.

Red Korean Army. The Korean Foreign Minister, Joso-Wang, explained that there were two complicating elements in the Korean situation which had not received adequate attention in the press. The first was the entrance into Korea of 30,000 Korean troops which had been trained and armed in the Soviet Union. Russia began training Korean troops at Vladivostok in 1935. These troops, serving under Russian officers, had entered northern Korea immediately after Russia's declaration of war against Japan, and were now in control of the areas about the ports of Yuki and Rashin, both important harbors.

In addition to the Russian trained and officered Korean divisions, there were "several thousand" Korean troops in the Chinese Communist forces of Gen. Chu Teh, now allegedly marching overland to Korea. Mr. Joso-Wang stated that prior to Russia's declaration of war the Russians had prevented the Korean Provincial Government in Chungking from communicating with Korean groups in Siberia. He declared, "even now the Korean Provisional Government is experiencing difficulty in establishing relations with the Russians in northern Korea. Joso-Wang called attention to a further complicating element in the military situation, due to the presence in the Japanese Army on the continent of many thousands of Korean soldiers." They had been recruited and trained by the Japanese, given Japanese names and uniforms and scattered through many of the Japanese armies all the way from China to the South Seas. Mr. Joso-Wang thought that all of these Korean soldiers would ultimately return to Korea and exert political influence. It was reported that large numbers of Koreans were congregating in Shanghai in the hope of obtaining ships to return to their homeland. It also was stated that a considerable number of Korean officers had been trained at the Chinese Central Military Academy in Nanking, and they also would be wanting to return to a liberated Korea.

The Soviet Magazine *New Times* in Moscow recently attacked the Korean Provisional Government in Chungking (now in Korea) and also the Korean spokesman in the United States, Singman Rhee, on the ground that "neither had any authority to speak on behalf of the Korean people." The Moscow magazine declared that Mr. Rhee "on several occasions had made statements hostile to Korea's nearest neighbor, the Soviet Union, and that now as the liberation of his country nears he is worried by the ghost of the Soviet danger—a danger which Rhee himself had created." The Moscow paper said that since Korea was a continental country it could achieve its greatest development "by receiving economic, technical and cultural help from the Allied nations and primarily from the powerful neighboring continental countries."

Entrance of Russian and American Troops. Russian troops first landed on Korean soil on Aug. 12 or slightly less than a month before the initial American landing which took place on Sept. 8. The first landing was at the recently Japanese-constructed ports of Yuki and Rashin on the upper northeast Korean coast opposite the Russian port of Vladivostok. The American landing took place at Jinsen on the western coast of the peninsula. There was considerable fighting between the Russians and Japanese troops in north Korea, but since the American landing was after the Japanese capitulation there was no Japanese resistance there and the

Americans were given a hearty welcome by Korean civilians.

The Koreans, however, quickly became resentful due to a misunderstanding resulting from a statement by Gen. Hodge that he intended to retain the Japanese administrators, and, temporarily at least, "govern through the Japanese command." Hodge also expressed the opinion that "half to two-thirds of the Koreans are afraid of the Russians."

Gen. Hodge, a graduate of the University of Illinois, had an excellent record in France in World War I and as an administrator on Leyte and Okinawa in World War II. Reports from other American sources, including the representative of the State Department attached to Gen. Hodge's Headquarters all referred to the "scarcity of competent Korean administrators who were not tainted with the charge of collaboration with the Japanese." It was explained in a dispatch by Homer Bigart in the New York *Herald-Tribune* on Sept. 11 that Gen. Hodge "had received only the vaguest directives from any quarter and in consequence had assumed he was expected to govern through the Japanese command." General Hodge was quoted as declaring, "who the government will be, I don't know. It will be decided on a higher level than mine." MacArthur immediately issued instructions to Hodge "to replace all Japanese in Government positions in Korea as soon as possible, consistent with the safety of operations."

Awakening of the Koreans. Richard J. H. Johnston, correspondent for the New York *Times*, who arrived in Korea with the American vanguard, said the chief problem faced by the United States occupation forces "is the awakening political consciousness of 30,000,000 Koreans who for thirty-six years had been kept from open political activity by the Japanese masters of their country." Mr. Johnston said that there were "sudden and immature stirrings of political activity by at least a half dozen factions or shades of Korean opinion . . . but the tragedy here is immediately apparent in the fact that the Koreans, completely dominated by their oppressors since Japan annexed the country in 1910, are pathetically inexperienced politically."

Japanese Governor Removed. Gen. Hodge announced on Sept. 12 that Nobuyuki Abe, Japanese Governor-General had been removed from office. Gen. Hodge made the announcement to a delegation of about 1,000 Koreans representing fifty-one different groups, of which thirty-three were political or semi-political in nature. Gen. Hodge also announced the removal of Radao Nishihiro, director of the Korean Police Bureau. The functions of Governor-General Abe were taken over by Maj. Gen. A. V. Arnold of the 7th Infantry Division, while the Police Director's duties were assumed by Brig. Gen. L. E. Schick, Provost Marshal General of the U. S. Forces.

Anti-Korean Laws Repealed. Gen. Hodge on Sept. 19 announced through the office of Gen. A. V. Arnold, the military governor of Korea that five Japanese "anti-Korean" statutes had been repealed. Of these the three most important were, (1) abolition of a law preventing political expression by Koreans, and providing for indeterminate imprisonment for Koreans suspected of favoring independence; (2) abolition of the Japanese "act of publication," which required Koreans to submit copy of any book or magazine to the Japanese Governor-General for approval before publication; (3) abolition of the Japanese "Law of Shrine" which attempted to impose Shintoism on the Koreans and compelled all Korean school children to worship at Shinto shrines on all Japanese na-

tional holidays. The Japanese Shrine law gave large areas of land and a large subsidy to every shrine. Shintoism was used to force Korean submission to the Japanese throne.

Missionaries Opposed Shrine Law. The Japanese action in forcing Korean school children to worship at Shinto shrines became a serious issue between Japanese colonial administrators and the American missionaries in Korea who refused to permit the pupils in their mission schools to worship at the Shinto shrines as such action was contrary to the teachings of Christianity. Several of the missions in northern Korea were forced to close their schools and withdraw from Korea as a result of their refusal to comply with the Japanese "Law of Shrine."

American Congressmen Fostered Korean Independence Movement. The active part played in the present situation in Korea by the Korean Provisional Government, has attracted attention to the fact that a delegation of American Congressmen and Senators traveling through Korea in 1919 were indirectly responsible for the organization of the Korean Provisional Government. The American Congressional party on a tour through the Far East, was contacted at Shanghai by members of the Korean revolutionary factions, who arranged for a conference when the Congressmen reached Seoul, the capital of Korea. But when the Congressmen arrived at the hall in Seoul where the meeting was scheduled, none of the Koreans appeared—all had been arrested by the Japanese police and put in jail.

When the Congressmen learned of the situation a group led by the late Stephen G. Porter of Pittsburgh, refused to leave the hall until the Japanese released the Koreans. The Japanese were finally forced, with poor grace, to comply.

It was out of this incident that the so-called Korean Provisional Government was formed and a declaration of independence and provisional constitution adopted. Japanese political police, for years spent their time searching out and arresting members of the "Korean Provisional Government," who had fled to China. For several years the Korean revolutionaries maintained a secret headquarters in the French Concession at Shanghai where they received help from American missionaries and also from the Chinese. After the Japanese invaded the Shanghai area in 1937 many of the Koreans were killed by Japanese gangsters.

Korea's Troubled History. Korea, which the Japanese renamed Chosen, or Tyosen, after they annexed the country in 1910, had a traditional history extending back to 1122 B.C. when the Korean Empire was founded. According to the ancient literature of the country and of China, Korea's history extends back for 4,000 years. According to recorded history the Korean Peninsula and its population were annexed by China in 108 B.C., but Korea regained her independence from China about 100 A.D.

Chinese influence, language, customs and the Buddhist and Confucian religions were dominant in the Korean Empire through the centuries, until 1895 when China was defeated by Japan, and Chinese political and economic influence declined rapidly.

Russians Also Interested. Since the period between 1895 and 1905 marked the high point of Russian Czarist expansion into China's northeastern territories, there ensued a bitter struggle between Russia and Japan for a dominant position in both Manchuria and Korea. This struggle culminated in the Russo-Japanese War, which, aside from naval en-

gagements, was fought entirely on the soil of south Manchuria with northern Korea within the zone of hostilities.

Russia's defeat was followed by Japan's assumption of a dominant position in Korean affairs and a long period of intrigue culminating in the barbarous assassination of the Korean King.

Peace Conference at Portsmouth. At the peace conference between Japan and Russia, which was held at Portsmouth, New Hampshire, upon the invitation of President Theodore Roosevelt, strong pressure was exerted by the American President on both sides to force a compromise. Japan was induced to forego a heavy indemnity which she had planned to impose on Russia to cover the cost of the war which had practically bankrupted the Japanese. Instead the Japanese were induced to accept the southern half of Sakhalin Island and were given a free hand in Korea. After the war certain American firms were given valuable contracts in reconstructing the railways of South Manchuria which had fallen to Japanese control. Thus was exemplified the power politics of an earlier age.

In 1910 Japan put all pretence aside and annexed Korea, making it a territory of the expanding Japanese Empire. While the Japanese previously had referred to the Korean Peninsula as a "sword pointed at Japan's heart," they now referred to the peninsula as a "bridge connecting Japan with the Continent." It was reported that the Japanese were engaged during the late war in constructing a tunnel under the Straits of Tsushima connecting the main Japanese Island of Honshu with the southern point of the Korean Peninsula. The Japanese had already completed an under-sea canal connecting the two islands of Honshu and Kyushu in this vicinity, hence regarded the other project (150 miles) as feasible.

America "Opened" Korea to World Trade. The United States was the first Western Power to establish peaceful diplomatic and commercial relations with Korea and for a time American merchants enjoyed profitable trade relations, particularly in textile goods, in Korea. Of special significance was an "alliance" or treaty which the United States signed with Korea whereby the two countries agreed to come to each other's assistance in the event of an attack on either party by another country. The Koreans attempted to invoke this treaty, but without success when the Japanese seized the country in 1910.

The late Dr. Sun Yat-Sen, "father" of the Chinese Republic used to refer to this treaty between the United States and Korea and declare that "Had America intervened to prevent Japan's seizure of Korea in 1910, Japanese expansion on the Continent would have been blocked."

JOHN B. POWELL.

KURE (Ocean). An island in the Pacific located 56 miles northwest of Midway Islands. It is a coral reef having a circumference of 14.7 miles. By Executive Order the island was placed under the jurisdiction of the Navy Department as of February, 1936.

CHARLES F. REID.

KURILE ISLANDS (Chishima). A chain of 47 islands reaching from the Japanese island of Hokkaido to the tip of the Kamchatka peninsula in the eastern Asiatic U.S.S.R. The most important islands are Kunashiri, Etorofu, Uruppu, Shimushiru, and Paramushiro. Total area: 3,944 square miles. Population: 5,000, exclusive of a large number of hunters and fishermen who enter the islands from

the south during the summer. The islands were occupied by U.S.S.R. after the surrender of Japan in 1945. According to the text of a secret Yalta agreement (made public Feb. 11, 1946) signed by the "Big Three" at Yalta on Feb. 11, 1945, "The Kurile Islands shall be handed over to the Soviet Union."

KUSAIE. An island in the eastern Carolines of the Japanese Pacific Islands; under the control of the Allies following the defeat of Japan in 1945. Area, 45 square miles. There is a fine harbor with large commercial piers.

KWANTUNG. The territory occupying the southern part of the Liaotung peninsula in Manchuria, leased from China by Japan; surrendered by Japan in 1945 to Allied armed forces. Area, including 40 adjacent islands, 1,337 square miles. Population (census of October, 1940), 1,367,334. Chief towns (1938 populations): Dairen, 515,743; Port Arthur (Ryojun), 145,286; Pulantien; Kinchow. The chief industries are agriculture, fishing, and salt manufacture.

LABOR CONDITIONS. The year 1945 saw the beginning of a relaxing of governmental control of labor conditions and labor relations. In the United States, with the end of the war, restrictions on labor mobility were lifted, and wage increases by collective bargaining or otherwise were freed of the requirement of government approval provided they would not result in price increases. Despite substantial cutbacks in munitions, aircraft, transportation equipment, and shipbuilding, unemployment did not increase to the extent anticipated. At the end of the year, only 1,750,000 were so classified. The hours of labor decreased with the gradual resumption of the 40-hour week marked throughout industry. Average hourly and weekly earnings, likewise, decreased due to diminution in overtime pay through the abolition of extra shifts and decreases in hours. Toward the end of the year the number and extent of strikes increased. Most of the strikes were motivated by a desire to maintain wartime earnings in take-home pay. In Great Britain labor controls were continued by the Labor Government for five years. The number of strikes increased as compared with 1944 but were shorter in duration. In Canada price and wage controls were continued but manpower controls were lifted. In contrast with British experience, American and Canadian strikes decreased in number, but working time lost by strikes increased greatly in 1945.

Employment and Unemployment. The advent of World War II had induced a mobilization of manpower greater than ever before in American history. In five years the employed population was increased by some 17 million persons. In April, 1940, civilian employment totalled 45 million. There were about one-half million in the Armed Forces. By 1945 the civilian labor force in the United States had reached a summertime peak of 55,220,000 but, as in 1944, declined to approximately 53,500,000 by the closing months of the year.

About 83 percent of all employed workers were in non-agricultural industries, the remaining 17 percent on farms. While the decline in agricultural employment during the war was about 9 percent, farm production was one-third greater than the average for 1935 to 1939. The number of men and women in the Armed Forces reached 12,300,000 immediately prior to the end of the war, but declined to approximately 10 million by the end of the year. By December 1945 the number of idle workers was estimated at 1,750,000.

Employment in the aircraft, shipbuilding, transportation equipment and ordnance industries declined drastically. Airframe workers reached over 900,000 in 1943, but dropped to less than 250,000 by August of 1945. Shipyard rolls declined after V-J Day to 762,300 on Sept. 15 as compared with a wartime peak of 1,722,500 in December, 1943.

ESTIMATES OF THE CIVILIAN LABOR FORCE, AGRICULTURAL AND NON-AGRICULTURAL EMPLOYMENT IN THE UNITED STATES IN OCTOBER 1942, 1943, 1944, 1945

(Millions of persons 14 years and older)

Labor Market Status and Sex	October 1942	October 1943	October 1944	October 1945
Total Labor Force	54.0	52.6	52.9	53.1
Employed	52.4	51.9	52.2	51.6
Non-agricultural Industries	41.9	41.2	43.5	42.8
Male	29.2	26.7	27.3	27.0
Female	12.7	14.5	16.2	15.7
Agriculture	10.5	10.7	8.8	8.8
Male	8.9	8.8	6.8	6.6
Female	1.6	1.9	2.0	2.2
Unemployed	1.6	0.7	0.6	1.55
Male	0.9	0.4	0.3	0.93
Female	0.7	0.3	0.3	0.62

* Excludes institutional population and armed forces
Source: U. S. Dept. of Commerce, Bureau of the Census.

In September the President abolished the War Manpower Commission together with virtually all of the controls, such as the requirement of statements of availability from individual employees, which had been imposed in order to direct the flow of wartime labor into high priority defense industries.

By 1945, 83,000 foreign workers had been recruited for work in the United States. Sixty-seven thousand of these were brought from Mexico to fill vacancies on American railroads, and 16,000 from the West Indies. Some 64,000 prisoners of war were working in food-processing plants, foundries, forestry and logging work, and other industries. After V-J Day the return of foreign workers to their homes was begun, and by the end of the year the number had declined to approximately 33,000.

In Great Britain the civilian labor force declined from 22,400,000 in June of 1944 to 21,652,000 in May of 1945. Unemployment, while almost twice that of 1944, was nevertheless quite low. In July of 1945 it was estimated there were 130,991 persons unemployed. The Essential Work Orders were continued in effect: workers whose jobs were covered by the Orders could not leave without the permission of the Representative of the Ministry of Labor. Exceptions were men of 65 or over and women of 50 or over, workers who had been away three years or more from their homes and could find important work near their homes, and people granted licenses to reopen shops or businesses.

In Canada the draft was ended shortly after the termination of the war with Japan, and other controls such as the compulsory transfer of men to more essential work, and Selective Service restrictions on women, were ended. The sole exception was in agricultural employment where the power to direct male persons between the ages of 16 to 65 was continued until the close of the harvest season in November. Unemployment rose from 3,241 in August, 1944, to 20,557 in August 1945.

Women Workers. When the war ended in August 1945, the number of women in the civilian labor force was estimated at 19½ million, of whom all but about 350,000 were actively employed. In May of 1940 there were approximately 13½ million workers in the labor force, 2 million unemployed

and seeking work. Women workers increased from a fourth of the labor force to a third during the war. It was estimated in 1945 that about 2 million of the employed women were from the group which had been unemployed in 1940, while about 3 million represented war-induced workers such as former housewives or retired workers, and girls leaving school for the purpose of taking jobs. In every group of employees, except domestic service which lost almost ¼ million women, there was a decided increase in employment. There were strikingly significant increases in manufacturing, in which the number of women employees was more than doubled.

A study by the National Industrial Conference Board with reference to the average weekly earnings of women showed the following in May, 1945.

AVERAGE WEEKLY EARNINGS OF WOMEN INDUSTRIAL WORKERS

War Industries	Civilian Industries
Shipbuilding ... \$49.80	Textiles ... \$33.01
Aircraft ... 48.27	Wool ... 28.71
Automobile ... 45.79	Hosiery & knit goods ... 28.71
Iron & Steel ... 42.69	Silk & rayon ... 27.73
Electrical ... 40.16	Cotton, north ... 27.72
Rubber ... 37.82	Meat packing ... 29.87
Tires and Tubes ... 42.17	Boot and Shoe ... 29.01
Other rubber products ... 33.41	Paper products ... 27.29
Chemicals ... 33.68	

The curtailment of war production in August, 1945 affected women about the same as men. Aircraft, ordnance, and shipbuilding showed a sharp decline. Except as to ordnance, there was no indication that women were being laid off in significantly greater proportions than were men. In the ordnance industry, however, women were dropped at a relatively faster rate: 64 percent as against 46.

With the increase of employed women the number enrolled in labor unions increased from the prewar figure of 800,000 to over 3 million by V-J Day. Delegates to a Women's Bureau Trade Union Conference stressed the fact that union protection and benefits to women are needed not only for them, but also as a means of safeguarding the standards of male employees and the interests of all.

Massachusetts passed an Equal Pay Bill which prohibited the payment of a lower wage rate to women than to men for work of comparable character or for work on comparable operations. A bill to the same effect was introduced in Congress, but no action on it had been taken when the year ended. Several states subsequent to V-J Day ended wartime relaxations of limitations on the employment of women.

The Labor Advisory Committee of the Women's Bureau of the Department of Labor urged dissemination of factual information indicating the necessity for employment of women, action toward nation-wide adoption of equal pay for equal work, and the improvement of existing minimum wage legislation.

Child Labor. As in 1944, the number of young workers 14 to 17 years of age working full or part time was estimated at nearly 3,000,000. This figure is to be compared with the 1940 figure of 1,000,000. The corresponding decrease in high school enrollment likewise continued. From 1940 to 1941 the number of high school students reached an all-time high of 7½ million; in 1944 and 1945 it had dropped to slightly below 6 million.

There was, however, a trend toward the reinstatement of legislative limitations on the use of

child labor which had been removed to aid war production. Illinois raised the minimum age for employment during school hours in factories, stores, and other specified establishments and corporations, from 14 to 16 years. Maine raised its 14-year minimum standard for work in factories and other specified establishments to 15. Child labor standards improved in Illinois, New York, Hawaii, Rhode Island, California, and Nebraska. Tightened compulsory school attendance laws were adopted in Georgia, North Carolina, Oregon, and Texas. Seven states, however, continued wartime relaxations.

The Secretary of Labor ordered withdrawal of the 1942 exemption of the 18-year minimum age limit for employment of girls under the Walsh-Healy Act. The exemption had permitted girls of 16 to 17 to be employed under certain conditions. The Children's Bureau of the Department of Labor revoked wartime amendments to Child Labor Regulation No. 3, issued under the Fair Labor Standards Act. Under these amendments, employers in raw shrimp, fresh fruit and vegetable packing houses, and fruit drying houses had been permitted to hire 14 and 15 year old minors. Hazardous Occupations Order No. 5 restricting employment of children on power-driven woodworking machines was likewise restored to its prewar status. A wartime amendment had permitted the use of 16 and 17 year old minors in operating certain machines.

Wages and Working Hours. During the early months of 1945 factory earnings continued at about the same comparatively high rates as in the latter part of 1944. By midsummer, with the end of the Japanese war, factory earnings declined substantially. By October the gross average hourly pay in all manufacturing had dropped below \$1.00, for the first time since December, 1943, to a figure of \$.985. Average weekly earnings declined to \$41.02 in October from \$47.50 in January, 1945. The decline in earnings was attributable to the disappearance of extra shift and overtime pay in heavy industry as well as the general return to a 40-hour week.

Nevertheless, October average weekly earnings of workers in all manufacturing were \$17.83 above the January, 1939, figure or 76.6 percent. Average hourly earnings were approximately 56 percent above the January, 1939, figure of \$.632 per hour

AVERAGE HOURS AND EARNINGS OF FACTORY WORKERS, SELECTED MONTHS, 1939-1945

Month and Year	Weekly Hours	Hourly Earnings	Weekly Earnings
January, 1939	36.7	\$0.632	\$23.19
January, 1940	37.5	.655	24.56
January, 1941	39.0	.683	26.64
January, 1942	41.7	.801	33.40
January, 1943	44.2	.919	40.62
October, 1943	44.4	.968	42.76
January, 1944	45.2	1.002	45.29
October, 1944	45.6	1.031	46.98
January, 1945	45.4	1.047	47.52
October, 1945	41.6	.985	41.02

Source: U. S. Bureau of Labor Statistics

Substantial numbers of workers in textile, food processing, agricultural and service trades continued to receive less than \$.60 per hour. In recognition of this situation several bills were introduced in Congress providing for the raising of the legal minimum wage to \$.65 per hour. These proposals were still awaiting action by the Congress at the year's end. The National War Labor Board amended its rules to permit employers to pay up to \$.55 (instead of \$.50) per hour without Board approval.

Average weekly hours worked in the United

States had dropped to 40.8 in August as compared with 44 in July, 1945, and 45.2 in September, 1944.

The Secretary of Labor established a minimum wage for the cigar and cigarette industry in Puerto Rico of \$.30 per hour. A minimum rate of \$.35 per hour became effective for the sugar industry in that territory. Minimum rates of \$.40 per hour were set in banking, insurance and finance, cement manufacturing, paper box manufacturing, rum and industrial alcohol manufacturing, and shipping.

In Canada weekly earnings in manufacturing averaged \$32.15 in August of 1945 as compared with \$31.63 in August of 1944, \$31.06 in August of 1943, and \$28.62 in August of 1942.

In Britain the first wartime decline in average weekly earnings of manual workers manifested itself during January, 1945. Thus was attributable to the reduction in working time, since average hourly earnings remained the same as in July, 1944. Between October, 1938, and January, 1945, the average increased 76 percent for all classes. Average weekly hours declined from 48.6 in July, 1944, to 47 in January of 1945.

The British Wages Councils Act, designed to insure minimum wage standards, was enacted in March of 1945. The Act established autonomous boards, composed of employee and employer representatives in a particular industry, which were empowered to fix legally enforceable standards. These boards, known as Wages Councils, have also the power to fix a guaranteed wage. Until December, 1950, employers must observe terms and conditions of employment not less favorable than those which were representative of substantial proportions of employers and employees engaged in that trade or industry in the district concerned.

In Luxembourg, minimum wage rates were set for all workers except domestic, agricultural, and house workers. In India, data gathered from several industries showed substantial wage increases for the period from 1939 to 1943. In Italy also increases were granted in specific localities in Central and Southern Italy during the period from November, 1944, to April, 1945. In Switzerland, although the wage index had advanced 42 points over 1939, real wages had dropped to 93, by the index in January and March of 1945.

Strikes. With the close of war in mid-1945, the United States experienced not only an increased number of strikes but also strikes of greater duration than those in the wartime years. The major ones were motivated by the decline in take-home pay and labor's demand for a corresponding increase of 30 percent in wages.

Illustrative were the strikes of the CIO Oil Workers Union which initiated the 30 percent demand; this was terminated by the Government's seizure of the struck companies. In November the United Automobile Workers, CIO, struck to obtain a 30 percent increase from General Motors, after indicating its strike strategy would be to initiate strikes against each of the large automobile producers singly. The United Steelworkers set a strike date for early in January which would involve 700,000 workers in all branches of the steel industry.

For the whole year 1945 the number of strikes was several hundred below the 5,000 reported in 1944. But the working time lost multiplied more than four times. The figure for man-days of idleness was 8,721,000 in 1944, as compared with about 35,000,000 in 1945. The number of workers involved in strikes increased more than a third between the two years.

In Great Britain the number of strikes was about

the same as in 1944, but the number of workers involved and time lost decreased.

In Canada, however, strikes did not increase, and the number of workers involved, also, was not significantly greater than in 1944. But duration of strikes and working time lost rose greatly. In the first ten months of 1945 man-days of idleness caused by strikes were 64 percent above the corresponding ten months of 1944. The most serious Canadian strike during the year involved a work stoppage of four months at the Ford Motor Company plant in Windsor, Ontario, involving 12,000 workers.

Australia, despite its compulsory arbitration laws, had its three most important industries—steel, mining, and shipping—all but paralyzed by strikes.

STRIKES IN UNITED STATES, CANADA AND GREAT BRITAIN, 1940 TO 1945

Country and Year	Strikes	Workers Involved	Man-Days Idle
<i>United States *</i>			
1945 *	4,600	3,325,000	35,000,000
1944	4,956	2,115,600	8,721,000
1943	3,752	1,980,000	13,500,000
1942	2,968	840,000	4,180,000
1941	4,288	2,360,000	23,050,000
1940	2,508	577,000	6,700,000
<i>Canada *</i>			
1945 *	182	90,509	1,478,811
1944	189	77,700	502,000
1943	402	218,400	1,040,000
1942	354	114,000	450,000
1941	231	87,000	434,000
1940	168	60,000	266,000
<i>Great Britain *</i>			
1945 *	2,282	530,000	2,830,000
1944	2,185	850,000	3,700,000
1943	1,785	557,000	1,810,000
1942	1,303	457,000	1,530,000
1941	1,251	360,000	1,080,000
1940	922	299,000	940,000

* Preliminary, subject to revision. * U.S. Bureau of Labor Statistics. * Canadian Labor Gazette. * British Ministry of Labor Gazette.

Collective Bargaining and Government Control. In August, immediately after V-J Day, President Truman announced that greater emphasis would henceforth be placed on collective bargaining and the War Labor Board would be terminated as soon as possible. At the same time Executive Order 9599 was issued permitting the granting of wage or salary increases without War Labor Board approval, on condition that price changes or increases in costs to contracting government agencies were not involved. If price changes or increases in costs to the Government were involved, approval was required; the approved wage adjustments were then to be taken into account by the Office of Price Administration in allowing price adjustments.

In the latter part of October, in response to complaints that the Government's wage and price policy was unclear, and in view of increasing labor disturbances arising over labor's demand for 30 percent wage increases to offset losses in take-home pay, Executive Order 9651 was issued. Employers were permitted to make wage or salary increases without waiting for approval even if price adjustments were considered necessary to offset the newly granted increases. If approval were asked and obtained from the War Labor Board, OPA was required to give immediate attention to granting appropriate price relief. Where wages were raised without prior approval, a period of six months was set before the employer might ask for price relief. The Order empowered the War Labor Board to approve wage increases in three new classes of cases: (1) Where the percentage of increase in

average straight time and hourly earnings since January, 1941, was not equal to the increase in cost of living between January, 1941, and September, 1945 (33 percent was officially announced as the cost of living increase in this period). (2) Where increases were necessary to correct inequities in wage rates or salaries among plants in the same industry or locality with due regard to normal competitive relationships. (3) Where increases were necessary to insure full production in an industry designated by the Stabilization Administrator as essential to reconversion and in which existing wage rates or salaries were inadequate to the recruitment of needed manpower.

In November the President convened in Washington a National Labor-Management Conference. Despite a message from President Truman stressing the urgency of agreement upon machinery for the settlement of industrial disputes, no agreement was reached with reference to this problem. The Conference adopted recommendations that expeditious collective bargaining be undertaken in initial contract cases under orderly procedures; that the United States Conciliation Service be strengthened and enlarged; that grievances arising under labor contracts and disputes concerning the interpretation of the contracts should be settled by voluntary arbitration; and that there should be no discrimination in employment because of race, creed, color, or national origin.

The War Labor Board went out of existence at the end of the year. Its dispute functions were taken over by the Conciliation Service of the Department of Labor, supplemented by Fact Finding Boards which the President asked Congress to authorize by legislation. A tripartite Stabilization Board was also set up in the Department of Labor to take over the duties of the War Labor Board relating to requests for approval of wage adjustments involving either price relief or wage decreases.

In Great Britain it was determined that labor controls would be continued for five years. The Conditions of Employment and National Arbitration Order was continued in effect. Under this order strikes or lockouts are illegal unless a dispute has been referred to the Minister of Labour and he has not settled it or referred it to arbitration within 21 days after reference to him. The Minister may refer the dispute to a body chosen by the parties or to the wartime National Arbitration Tribunal. In either case, the decision is compulsory. All employers are required to observe the terms and conditions operating in each district. This generally means the terms and conditions contained in collective bargaining agreements.

In Canada wage controls were continued but manpower controls were eliminated.

Labor Movements. In the United States, due to transportation difficulties, no conventions were held by the AFL or the CIO during the year.

In January, 1945, some 14½ million workers in the United States were employed under collective bargaining contracts. These workers included approximately 47 percent of all workers employed in industry in occupations in which unions are actively engaged in obtaining written agreements with employers. There were approximately 30½ million employees in such occupations. About 8½ million production wage-earners in manufacturing industries were employed under the terms of union agreements at the beginning of 1945, or approximately 65 percent of all production wage-earners; an increase for the year 1944 of about 8 percent in the proportion of employees working under union

agreements. Approximately 33 percent, or slightly more than 5½ million employees, of all non-manufacturing workers were employed under the terms of union agreements at the beginning of 1945, representing an increase during the year of 6 percent in the proportion of employees working under agreements.

By January, 1945, approximately 27 percent (3½ million) of all persons employed under union agreements were employed under maintenance of membership clauses, representing an increase during the year 1944 of almost 23 percent in the proportion of workers under such agreements. About 28 percent (4 million) of all workers under agreements were employed under closed shop agreements, and about 18 percent (2½ million) under union shop agreements. About 28 percent of the proportion of workers under agreements were covered by some form of check-off provisions.

In September, 1945, the British Trades Union Congress held its 77th annual conference at Blackpool, England. The Congress represents approximately 6 million workers. Resolutions were adopted or presented for adoption of the 40-hour week "in stages appropriate to the circumstances of each industry," urging continuation of the system of shop steward and joint production committees established for wartime purposes, seeking assurance from the Government that temporary surplus workers should not be used for the purpose of lowering wages, recommending establishment of a guaranteed weekly wage, recommending enforcement of all negotiated wage agreements and the payment of "rate on the job" in all government employment with establishment of a similar basic rate for men and women, recommending the stepping up of the rate of discharge of men and women from the Armed Services, and recognizing the right of farm workers to wages and conditions obtaining in other skilled industries.

The International Federation of Trade Unions met in the early part of 1945. The General Council refused to favor a change in its constitution permitting the CIO and Russian trade unions to enter the Federation, but delayed final action on the proposal. In December the Federation ended its existence of 40 years. The AFL which had opposed entry of CIO and Russians was not present at the final meeting.

In February, 1945, a World Labor Conference called by the British Trades Union Congress met in London. After some opposition, unions of former enemy countries such as Bulgaria, Roumania, Italy and Finland were admitted to the Conference. The CIO and the Russian trade unions were represented. The AFL refused an invitation to attend. A committee was appointed to draft a constitution for the establishment of a new World Federation of Trade Unions. The Conference asked for labor representation at the San Francisco Conference to set up the United Nations Organization. The AFL attacked the new body as fostering a dual world unionism.

Late in September the World Federation of Trade Unions met in Paris. The Conference lasted 8 days. Delegates from fifty-six countries attended the Conference representing approximately 66 million people. A constitution was adopted which provided for biennial meetings of the Congress, that all trade union organizations were to be accepted without discrimination, and that there should be established a General Council with a representative from every affiliated organization which would meet annually. The AFL did not participate and refused to join the organization.

In the latter part of October and early November

the annual International Labor Organization Conference was held at Paris. Motions were adopted clearing the way for affiliation with the United Nations Organization, and it was determined that an appropriate place would be sought for the ILO in that organization. The San Francisco Conference had taken no direct action with respect to the ILO but adopted a general provision under which "the various specialized agencies, established by inter-governmental agreement and having wide international responsibilities" are to be brought within the United Nations Organization through negotiation with the Economic and Social Council.

At the ILO Paris Conference various constitutional amendments were proposed which would change the method of representation which now consists of 2 government delegates, one workers' delegate and one employers' delegate, from each country. The French and Belgian representatives proposed that there be 2 representatives from each of these groups, while the Latin American countries sponsored an amendment which would increase the number of workers' delegates by one. Employer groups opposed the proposed amendments. The Conference agreed to submit the proposed amendments to the 1946 Conference after comment by the member governments. Italy was admitted to membership.

In Belgium, more than 900 delegates of 4 important labor movements gathered at a Congress of Unity in Brussels in April and voted to unite in a single General Federation of Labor. The Congress adopted a program stressing the duty of the labor movement to obtain favorable working conditions, including a minimum wage based on "needs of contemporary civilization," limitation of working hours, health and safety legislation and special protection for women and youth, organization of apprenticeship with the collaboration of unions, and comprehensive social security.

In Bulgaria it was reported that as of May, 1945, there were about 350,000 trade union members as contrasted with 162,000 in 1939. The Executive Committee of the Italian General Confederation of Labor met in April, 1945, and adopted resolutions favoring the adoption of a sliding scale of wages based on the cost of living, equal pay for equal work for men and women, labor representation and advisory committees to be established to assist various ministries of the government, and proportional representation for labor in the National Consultative Assembly which the government was to establish.

In France the participation of labor in the management of industrial and commercial undertakings was begun by governmental decree. In all industrial and commercial undertakings employing more than 100 persons, a shop or office committee was established consisting of the employer and a maximum of 8 delegates elected by the workers. The committee was to have the power of binding decisions in matters affecting the welfare of the workers, but only the power of suggestion in questions affecting management, under a decree issued by the French Government. It was reported there were approximately 4 million members of labor unions in France.

Paraguay reported that the membership of legally constituted trade unions at the beginning of 1945 was 10,699.

In Germany trade unions were permitted to function in each of the 4 zones occupied by the Allied powers. A suggestion to the Allied Control Council that trade unions be allowed to organize on a national basis was defeated by French objection.

Federal Labor Legislation. A rider to the Deficiency Appropriation Bill passed by Congress in December, 1945, stopped the National Labor Relations Board from taking strike votes as provided by the (Smith-Connally) War Labor Disputes Act of 1943. The law remained in effect, however, and the requirement that representatives of labor organizations shall file with the Government notices of intention to strike is still in effect. A bill to repeal the law was introduced in Congress by one of its authors, Mr. Smith, and this was later amended by the House Military Affairs Committee to prohibit financial contributions by labor unions in connection with Federal elections, primaries and political conventions, as well as to penalize unions for striking in violation of agreements which contain a no-strike provision. But a rule calling up the bill for consideration, as so amended, was defeated in the House of Representatives.

Another rider to an appropriation law provided that the United States Employment Service, which had been federalized during the war, be returned to the states within 100 days. This was attached to an Act adopted by both houses of Congress rescinding certain war appropriations for government agencies. But President Truman vetoed the Act because he was opposed to returning the Employment Service to the states for another year at least, and also because he objected to legislation by means of riders to appropriations.

The Hobbs bill amending the Copeland Anti-Racketeering Act to remove exemption of certain labor union activity was passed by the House. The Anti-Racketeering law makes it a felony for any one acting in concert with others to interfere with interstate commerce by obtaining, or attempting to obtain, by force or threat of force the payment of money or other valuable consideration . . . not including, however, the payment of wages by a bona fide employer to a bona fide employee." In *U.S. v. Local 807*, the Supreme Court held that certain activities of a labor union were not within the scope of the Anti-Racketeering Act because of the above-quoted language. In that case members of the union met non-union trucks entering New York City and insisted on the trucks being turned over to union members to drive for the part of the trip within the city. If non-union truck drivers refused, the trucks were held up until union wages were paid to the union members even though their services in driving the trucks were not accepted. The Court found that the exception made for payment of wages to a bona fide employer to a bona fide employee covered this situation. At the end of the year the Hobbs amendment was awaiting action by the Senate.

Both a Senate and a House committee held extended hearings on proposed amendments to the Fair Labor Standards Act that would increase the legal minimum wage from 40 to 65 cents an hour, but at the year's end neither committee had yet reported its recommendations. A Supreme Court decision interpreting the Fair Labor Standards Act, held that although an employee voluntarily accepted a settlement of a claim for overtime pay, and released the employer from further claims, this did not bar later claims for unpaid damages under the Act (*Brooklyn Savings Bank v. O'Neill*).

Although the President had repeatedly requested that Congress take action on a pending bill to establish a Fair Labor Practice Commission for the purpose of preventing discrimination in employment on account of race, creed, color or national origin, the bill was held up by a committee which refused to report it out. A petition to relieve the

committee of the bill and bring it before the House of Representatives for action was being circulated, but lacked sufficient signatures when Congress adjourned for the Christmas and New Year holidays. Two states, however, New York and New Jersey, did adopt such anti-discrimination laws. In addition, Indiana and Wisconsin enacted laws authorizing their state labor departments to hear complaints of such discrimination, and to make recommendations and publicize their findings. In Utah a legislative committee was appointed to investigate discrimination on account of race, creed and color, and to recommend legislation. The Supreme Court of the United States ruled in *Railway Mail Association v. Corsi*, that the New York State anti-discrimination law did not violate any provision of the Federal constitution.

Pursuant to a Congressional message from President Truman, identical bills were introduced in the Senate and House providing for appointment of fact finding boards by the President in disputes affecting the national interest. These bills authorize the President to appoint impartial "Fact Finding Boards" to investigate unsettled labor disputes which are certified to him by the Secretary of Labor as seriously threatening to public interests. The boards are to make findings of fact and recommendations within 20 days after their appointment, and they are given power to subpoena persons and records. For 30 days after the Secretary of Labor certifies a dispute to the President the parties may not strike or lockout. If a work stoppage is in effect at the time of certification, operations must be resumed, but no penalties are provided for violation of the 30-day "cooling off" period.

The President requested enactment of this legislation before Christmas, but Congress adjourned before committee hearings were completed. The committees decided to extend the scope of the hearings to include other bills which had been introduced to deal with the strike problem and methods of settling industrial disputes. Most important of these were: (1) the Hatch-Ball-Burton bill which would drastically amend the National Labor Relations Act, set up statutory agencies in the Department of Labor for mediating disputes, and provide for compulsory arbitration in cases where interruption of essential public services are involved; (2) a bill submitted by Senator McMahon of Connecticut to establish the Conciliation Division of the Department of Labor on a statutory basis, create a Board of Arbitration, and provide for temporary Boards of Inquiry for fact finding purposes.

During the year Hawaii and Puerto Rico adopted comprehensive labor relations laws prohibiting unfair labor practices by labor unions as well as by employers. Connecticut enacted a "Little Wagner Act" modelled after the National Labor Relations Act. A so-called "right to work" law making illegal virtually every type of union security provision was passed by the legislature of the State of South Dakota. The Colorado Supreme Court held unconstitutional provisions of the Colorado Labor Peace Act requiring labor unions to incorporate, and making unlawful strikes not authorized by a majority vote in a secret ballot. And the U.S. Supreme Court declared unconstitutional a Florida statute providing for licensing of union business agents, as well as a section of a Texas law regulating unions which required union organizers to get registration cards from the Secretary of State before soliciting members for a union, and barring aliens from acting as labor organizers.

The Sherman Anti-Trust Act was interpreted by

the Supreme Court as being applicable to labor unions where such organizations aid and abet employers in procuring a monopoly (*Allen Bradley Company v. Local Union No. 3, IBEW*). In another case under this Act, a union was held to be within its rights when it refused to permit its members to work for a trucking company as a result of a labor dispute, and refused to admit to membership anyone who did work for this employer, although the company was put out of business by the union's policy (*Hunt v. Crumboch*).

WILLIAM M. LEISERSON.

LABOR STANDARDS, Division of. A Division of the U.S. Department of Labor, organized in 1934, authorized to develop desirable labor standards and to make specific recommendations to improve working conditions and the economic position of wage earners. Director in 1945: Verne A. Zimmer.

LABOR STATISTICS, Bureau of. A Bureau of the U.S. Department of Labor, established in 1913, charged with the duty of acquiring and diffusing information on subjects connected with labor. Information is issued in special bulletins and in the *Monthly Labor Review*. The Commissioner of Labor Statistics in 1945 was Isador Lubin (A. F. Hinrichs, Acting).

LABOR, U.S. Department of. A Department of the U.S. Government which in 1945 consisted of the following principal bureaus and divisions:

Bureau of Labor Statistics
Children's Bureau
Division of Labor Standards
U.S. Conciliation Service
Wage and Hour and Public Contract Divisions
Women's Bureau

Special wartime organizations functioning within the Department are the National Committee for Conservation of Manpower in War Industries and the National Advisory Committee on Working Conditions.

See the articles on the separate branches and, for reports compiled within the Department, CONSUMERS' COOPERATIVES; JUVENILE DELINQUENCY; LIVING COSTS, ETC. Secretary of Labor: Lewis B. Schwellenbach.

LACROSSE. United States Intercollegiate Association teams put on many interesting games last season, but one of the greatest contests in years was the big battle at Annapolis, Md., where those old service rivals, Army and Navy, fought to a 7-7 deadlock in an overtime thriller. Both teams had swept aside all other college opposition with the result that the tie left them as co-owners of the Wingate Trophy, emblematic of the intercollegiate title that the Cadets had won outright in 1944.

The Hopkins L. C. of Baltimore proved best of the club tens, a 10-7 decision over powerful Army being the highlight of its campaign.

THOMAS V. HANEY.

LAND UTILIZATION, Office of. An office of the U.S. Department of the Interior, created in 1940, which coordinates and integrates the land use and management activities of the Department. Assistant to the Secretary in charge of Land Utilization: Lee Muck.

LATIN AMERICAN ART. Interchange of art exhibits among the American Nations was recognized as an important factor in intellectual collaboration, in a

convention signed at Buenos Aires by delegates of all the American Republics in 1936. As expressed in that reunion, the nations of the Western Hemisphere were "desirous of improving their spiritual relations through a better acquaintance with their respective artistic creations." Thus intellectual interchange was given, in the Americas, a coordinate place with the peaceful settlement of international disputes, non-intervention, the outlawry of force, the observance of treaties, and the precepts of international law.

Individual governments in various Latin American countries have long fostered art by supporting free national schools, and giving fellowships for study abroad to talented students. Thanks to these favorable circumstances, painting, sculpture, and all forms of esthetic expression have found a fertile ground in Latin American soil, and today many works of art by South and Central Americans are in the museums and private collections of Europe and North America.

Government-fostered art and international exhibitions have encouraged artists to play on national or indigenous themes, portraying customs and typical scenery, thus enhancing the value of cultural interchange.

The outstanding Latin American painters of today are those of the several Mexican schools, Diego Rivera, José Clemente Oroscó, and David A. Siqueiros. The influence of Rivera and Oroscó is apparent in much of the art from the Rio Grande to Tierra del Fuego. While the Mexican revolutionary artists headed a rebirth of the ancient Aztec, Tarascan, and Zapotecan art, a similar revival of native lost arts, such as the Inca of Perú, the Aymará of Bolivia, the Chibcha of Colombia, was patterned after the Mexican Renaissance and developed in those countries where native Indian civilizations flourished before the Spanish and Portuguese conquests.

In the opinion of one advanced Latin American editor, Rivera and Oroscó are the "precursors" of a modern Latin American Renaissance. Like the early painters in Italy whose works did not reach the status of "masterpieces," but who definitely established a trend in painting that divorced the art of their contemporaries from the static Byzantine patterns, and later paved the way for the great masters, Raphael, Tintoretto, Michael Angelo and Leonardo da Vinci, the modern Mexican painters may have set a pattern for the development of Latin American art. Through the work of this school and its large following, that art will have a definite character distinguishing it from the European, even though it has not yet attained its full expression and the great masters are yet to come.

Although this theory may seem sacrilegious to those critics who have long held the paintings of the Mexican revolutionaries to be modern masterpieces, the balanced critic will consider the murals of Rivera, the canvasses of Charlot, and the drawings of Oroscó, as steps rather than the finished products of this artistic evolution.

As in most of Latin America, colonial art in Mexico followed a European model, particularly Hispanic. In the early days of the vice-royalty, the San Carlos Academy was established in Mexico City. Artists who came from Europe, and Mexicans, some of whom went abroad for training, introduced successive foreign styles. Though indigenous forms then received little conscious attention, all of the imported styles were more or less affected by local scenery, customs and a regional viewpoint. It was as though the importations were translated into the vernacular.

However, it was not till the twentieth century that the treatment of the Indian motif and the national theme received full recognition, in an artistic revolt that followed the political upheavals and was headed by Carlos Mérida and Diego Rivera, and later followed by Jean Charlot.

Many of today's younger Mexican painters, such as Luis Arenal, Federico Cantú, José Gutiérrez, Pablo O'Higgins, and Conrado Vasquez, were at one time helpers to Rivera and Siqueiros, in the same fashion as the old Italian masters served their apprenticeship under famous painters of their time. Many others, both in Mexico and in other parts of Latin America, have consciously imitated or unwittingly let themselves be influenced by the Mexican school.

The increased use of Indian motives from primitive arts and folklore that may be observed in the modern school of Bolivia bears a strong resemblance to the Mexican revival, with the Aymará substituted for the Aztec, such as the paintings of Cecilio Guzmán Rojas and Víctor Cuevas Pabón. These artists not only turn away from the classics in the selection of themes, but they follow the revolutionary undercurrent in their simplification of anatomy and their combination of colors.

This general trend toward stylization may be observed as well in various other countries, in diverse interpretations, as José Sabogal of Perú, Luis Alberto Acuña of Colombia, Tomás Santa Rosa of Brazil and José Mejía Vides of El Salvador.

Sabogal is considered by Waldo Frank to be the equal of Rivera in Perú, the creator of a distinctively Peruvian school. There too the impress of Europe was strong on native painting in early colonial times. Since artists found in the Church their best patron, sacred themes naturally predominated. The early years of the republic in Perú produced two painters of rank, Merino and Lazo. The early twentieth century had its foremost exponent in Daniel Hernández, who in 1918 became the founder of the government-sponsored National School of Fine Arts. Since then there has developed a movement to make use of the modern idioms in painting, of which Enrique Camino Brent and José Sabogal are excellent examples.

A similar development of art from colonial times to the twentieth century may be traced in almost any Latin American country, with few exceptions. In Colombia, although European ideas, mainly Hispanic, were implanted in painting, colonial art had nevertheless a strong local character. Imported ideas from overseas were generally adapted to the taste of the people and to the highland environment. Today art thrives in Colombia. Several styles ranging from the neo-classical to impressionism are being cultivated, and among the most notable of Colombian painters are Luis Alberto Acuña and Ignacio Gómez Jaramillo, who studied the Mexican art movement on behalf of the Colombian Government. Gómez Jaramillo painted the murals of the Teatro Colón in Bogotá.

Many different schools of painting have taken root in Argentina. Today Buenos Aires is the center of lavish artistic production, both by native and foreign artists. The vivid country scenes of Fidel de Lucía, in an imposing color array, contrast with the still lives of Héctor Basildua, who, as artistic director of the Colón Theater in Buenos Aires, has developed the theatrical scenery, costumes and decorations for more than fifty ballets and operas. There are excellent portrait artists such as Cesáreo Bernaldo de Quirós, Antonio Berni and Ramón Gómez Cornet, as well as interpreters of local customs like Florencio Molina Campos.

Molina developed a technique in a combination of water colors and tempera. Now he works in oils. His animated landscapes of the endlessly flat Argentine pampas are so original, so grotesque and yet so life-like, that they command the admiration of both the critic and the untutored. Molina Campos is a satirist. His characters are all grotesque; his horses have quasi-human expressions. Yet he is so comprehensive in depicting the joys and sorrows of the "gaucho" of the pampas, that his real life characters, far from feeling caricatured or ridiculed, see themselves mirrored in his canvasses.

Painting in Uruguay, as in neighboring Argentina, has grown in sparkle and virility in the twentieth century, and there also numerous followers of all schools practise and exhibit at the *Círculo de Bellas Artes*. Notable among Uruguayan artists of today are César A. Pesce Castro, whose anatomical studies at the medical school, prior to his study of painting, gave him a broad foundation, which so many modern artists lack or ignore, and Carmelo de Arzadún, who depicts rural scenes of his native country. Pesce Castro has been director of the National Museum of Fine Arts at Montevideo.

Among the new generation of Brazilian painters are portraitists like Leopoldo Gotuzzo, landscapists as Funchal Garcia, Vicente Leite or José Pancetti, and followers of the modern schools—Lucy Citti Ferreira, Tomás Santa Rosa, Jr. and Orlando Teruz. The modernist tendencies in Brazilian art have been given official recognition. Rio de Janeiro, however, home of the National School of Fine Arts and the National Museum, still clings tenaciously to tradition, while São Paulo shelters the young artists who strive for short cuts to art and new points of view. The two clashing ideologies seem to agree on one point—the use of indigenous symbolism and the preponderance of national themes.

Chile, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Panamá, Nicaragua, the Dominican Republic, Venezuela, Paraguay, and Puerto Rico, each have their outstanding artists, with many racial backgrounds, each with his own particular individuality.

In Chile, the Academy of Painting was established as early as 1849. Notable painters of that country include Benito Revollo C., whose symbolic paintings have a social commentator's viewpoint, Pablo Burchard, sculptor and portraitist, and Jorge Caballero, director of the Museum of Fine Arts in Santiago. Costa Rica's Manuel de la Cruz González and Esmeralda Lorin de Povedano, are outstanding among a select group, while in Cuba the rich tropical scenery of the island has its foremost interpreters in Domingo Ramos, Antonio Rodríguez Morey and Leopoldo Romañach. The latter is the classical master of Cuban painters.

Ecuador has produced Bolívar Ollague, Enrique Gómez Jurado, Pedro León D., and Sergio Guarderas, whose village scenes won him the first prize in the Latin American Exposition of Fine Arts in Viña del Mar, Chile, in 1938.

In Central America, various artistic trends may be discovered in each country, as in the canvasses of Salvador Salazar Arrué, known as "Salarrué," from the Republic of El Salvador, who originated a style of his own which he called "indian tapestries," or his compatriot José Mejía Vides. Alfredo Gálvez Suárez of Guatemala is notable for his portraits of indigenous characters, while the Guatemalan Carlos Mérida is of the modernist school, painting strange forms in rich color contrasts. Carlos Zúñiga Figueroa and Maximiliano Euceda of Honduras, Ernesto Brown, Jr., of Nicaragua,

Humberto Ivaldi of Panamá, comprise a legion of younger artists who are well known throughout their five small republics.

In Paraguay art instruction is compulsory in the primary and high schools. Pablo Alborno organized the Asunción Academy of Fine Arts and painted the portraits of many heroes of the country's struggle for independence. Jaime Bestard's scenes of rural life have won him acclaim.

The Dominican Republic, though small, has produced several noteworthy artists. Among the moderns is José O. Morel, generally considered the representative painter of the Republic, Celeste Wos y Gil, and Rafael D. Palacios.

Modern Venezuelan paintings seem to have a preponderance of landscapes. There is also a marked tendency to the portrayal of native types and the national scene. Foremost among painters of today are Tito Salas, of the modern school, Luis Alfredo López Méndez, Cruz Alvarez Sales, Francisco Narváez, who is a sculptor as well, and Héctor Poleo.

Puerto Rico belongs with Latin America, since this island has the same artistic heritage as the neighboring Hispanic-American Republics, though politically a part of the United States. The first independent exhibition of Puerto Rican art, in 1936, gave evidence of the progressive spirit which animates the island's painters, such as Rafael Ríos Rey, modernist, Cesar Bulbeno, who has devoted himself to murals, Miguel Pou, portraitist, and Luisa Geigel, both a painter and sculptor.

In caricature Latin American art ranks with the best.

Sebastián Robles, of Perú, can draw from memory several hundred international personalities by exaggerating one or two of their more prominent features; Miguel Covarrubias of Mexico, uses pastels or water colors for his famous full color caricatures; and Conrado Massaguer of Cuba, is known for a contagious artistic sense of humor.

ANTONIO J. CÁRDENAS.

LATIN AMERICAN LITERATURE. The outstanding and most heartwarming literary event of the year for Latin America was the award of the Nobel Prize for Literature to Gabriela Mistral, the first time this award has been made to a Latin American. Gabriela Mistral is the pen name of Lucila Godoy Alcayaga, who was born in Vicuña, Chile, in 1889. In 1915, the first prize in a poetry contest in Santiago was won by her *Sonetos de la muerte*, whose rugged directness of emotion and poetic imagery marked a turning point in Chilean poetry. The first collection of her poems, *Desolación*, was published in 1922 by the Instituto de las Españas in New York. A second volume of poetry, *Ternura*, was published in 1924 in Madrid, and a third volume, *Tala*, in Buenos Aires in 1938. Her prose (*Lecturas para mujeres*, Mexico, 1923) is no less distinguished than her poetry, and all her literary work mirrors her strong, passionate, and compassionate nature. Her voice is raised in defense of children, women, the poor and oppressed of all races and all nations. It is not dainty, facile verse that she writes, but elemental poetry, as if hewn from stone.

Like many other Latin American writers, Gabriela Mistral has had a distinguished career of public service. Because of her years of devotion to education, she was invited to go to Mexico to aid in the reorganization of the rural schools in 1922. In 1931 and 1932, she taught at Barnard College, Middlebury College, and the University of Puerto Rico. A delegate to many international conferences,

she became Secretary of the Institute for Intellectual Cooperation of the League of Nations. She has served as Chilean Consul in Europe and in Brazil. Her writing, and her whole life, reveal one of the noblest figures of our time.

The most auspicious publishing venture of the year is the Colección Tierra Firme, published in Mexico by the Fondo de Cultura Económica, a literary trust fund. The Colección proposes to make an objective study of all phases of Latin American life and history, commissioning books by the most eminent authorities in each country. So far, in 1944 and 1945, an impressive beginning has been made in studies by such critics as Sanín Cano, Jiménez Rueda, Picón-Salas, Gilberto Freyre, Medardo Vitier, and Germán Arciniegas.

Three original works and five translations of Latin American literature, published in the United States, are worthy of note. *Literary Currents in Hispanic America*, by the distinguished Dominican critic, Pedro Henríquez Ureña, is an informative and creative study of four centuries of culture. Erico Verissimo's *Brazilian Literature: An Outline* is a witty and succinct introduction to modern Brazilian literature. Jefferson Rea Spell's *Contemporary Spanish American Fiction* is a useful compilation of biographical facts about ten prose writers of the twentieth century: Gálvez, Azuela, Loveira, Barrios, Horacio Quiroga, Rivera, Güiraldes, Rómulo Gallegos, Icaza, and Ciro Alegria, with synopses of their works.

The translations are *Knights of the Cape*, from the *Tradiciones peruanas* of Ricardo de la Palma; Ricardo Rojas' *San Martín: Knight of the Andes*, a definitive biography by the great Argentine historian and critic; Jorge Amado's *The Violent Land*; Alfredo d'Escagnolle Taunay's late nineteenth-century romantic novel, *Inocência*, and Adolfo Costa du Rels' *Bewitched Lands*, a novel of the Bolivian Chaco.

A great loss to Spanish American literature was the death, in June, 1944, of Enrique Díez-Canedo, Ambassador of the Spanish Republic to several Spanish American countries, and a political exile in Mexico since the advent of Franco. A zealous and perceptive student of Spanish American literature for many years, Díez-Canedo left a fitting summary of his critical work in his posthumous *Letras de América*.

Argentina. The Premio Sur was awarded to Roberto Ledesma for two volumes of poetry, *Tiempo sin ceniza* and *Nivel del cielo*. Other noteworthy books of poems are Jorge Calvetti's *Fundación en el cielo*, Arturo Serrano Plaja's *Versos de guerra y paz*, and J. R. Wilcock's *Ensayos de poesía lírica*. Worthy of special comment is the abundance of fine poetry that has appeared in the review, *Sur*.

In prose, *El pensamiento vivo de San Martín* is a summary of the thinking of Argentina's national hero, made by one of the most vital critics of modern Argentina, Arturo Capdevila. Manuel Gálvez's *Vida de Sarmiento* reveals less of Sarmiento's greatness than of his biographer's limitations as thinker and philosopher. Ricardo Rojas' *El profeta de la pampa: vida de Sarmiento* is a definitive life of the teacher-president by one of Argentina's most distinguished historians. Diego Manuel Sequeira's *Rubén Darío criollo* is an important biography of the great Nicaraguan poet. The Comisión Nacional de Cultura gave its first award to *Rodeada está de sueño*, a volume of prose poems by Eduardo Mallea, one of the most distinguished stylists in America. The Sociedad Argentina de Escritores awarded the Gran Premio de Literatura to *Ficciones*, in which another of America's great stylists

in prose and poetry, Jorge Luis Borges, has collected his short stories of the past decade. Manuel Peyrou's *La espada dormida*, a remarkable volume of detective stories, won the Premio Municipal de Literatura. Alberto Córdoba's *Don Silento* is in the great tradition of gaucho literature. Arturo Canela's *Historia funambulesca del profesor Landormy* is a fantastic novel, written by a master of irony. Two psychological novels, both revealing promising talent, are Sylvia Bullrich Palenque's *La tercera visión* and Estela Canto's *El muro de mármol*. Adolfo Bioy Casares has repeated his triumph of *La invención de Morel* (1940) with another brilliant, fantastic novel, *Plan de evasión*.

Bolivia. Augusto Guzmán's *Tupaj Katari* (Colección Tierra Firme) is a novelized account of the eighteenth-century revolt led by José Julián Apasa. Alfonso Crespo's *Santa Cruz, el cóndor indio* (Colección Tierra Firme) is a biography of the Bolivian general and statesman, Andrés Santa Cruz. In his novel, *Oro del Inca*, Luis Toro Ramallo describes the desperate plight of the Bolivian Indians.

Brazil. A great loss to Brazilian literary and artistic life was the death of Mario de Andrade. Poet, critic, novelist, and one of the most dynamic figures in Brazilian literature, Andrade was one of the prime movers in the renaissance of painting and literature in the 1920's. His *Amar, verbo intransitivo*, one of the landmarks in the Brazilian novel, was translated into English as *Fraulein* in 1933.

Among works of criticism are Diogo de Melo Meneses' biography of Gilberto Freyre, Brazil's most noted ethnographer and social historian, and the author of *Interpretación del Brasil* (Colección Tierra Firme). Pedro Calmon's *Historia do Brasil na poesia do povo* is an interpretation of Brazilian history through the medium of folk-poetry. Astrogildo Pereira's *Interpretações* is the first published book of a critic whose social essays have appeared for many years in magazines. In his *Letras de província*, Moysés Vellinho writes of regional literature in Rio Grande do Sol. Mario Sette's *Maxabombas e maracatus* is a re-creation of the social life and traditions of Pernambuco in 1900. In *Las poblaciones del Brasil* (Colección Tierra Firme), Arthur Ramos, a leading social anthropologist, analyzes racial mixture in Brazil. *Escrutores antillanos* is a study of eight West Indian authors by Silvio Júlio, the most eminent Brazilian authority on Spanish American literature.

Chile. The Premio Nacional de Literatura, which has previously been awarded to three of Chile's major novelists, Augusto D'Halmar, Joaquín Edwards Bello, and Mariano Latorre, was awarded this year to one of her very great poets, Pablo Neruda. The Atenea prize for fiction went to Rafael Maluenda for his *Armiño negro*, and to Remaldo Lumboy for his *Ranquil*.

Two notable works of criticism are *Vida y poesía de Rubén Darío*, the most complete biography and critical study of Darío, written by the famous Chilean poet and critic, Arturo Torres-Rioseco, and Domingo Meli's *El viaje literario*, critical studies by one of Chile's finest scholars.

Four volumes of poetry and one anthology should be mentioned: Rosamel del Valle's *Orfeo*, Pedro Prado's *Esta bella ciudad envenenada*, Oscar Castro's *Reconquista del hombre*, Humberto Díaz Casanueva's *Requiem*, and Alberto Lefevre's *Poetas chilenos*.

Oscar Castro, in *La sombra de las cumbres*, added to his fine reputation as a *cuentista*. Also noteworthy are Luz de Viana's *No sirve la luna blanca*, five stories superbly written, with a delicate, impressionistic style; Dinka de Villaroel's

Norte adentro: en tierra de Cunzas, about the Chilean nitrate fields; María de Clarés' *Cuando el agua es clara*, a first novel of rural Chile; Rafael Fernández Rodríguez's *Tierras de Pedro Ramírez*, on the Colchagua region; Mila Oyarzún's *Cartas a una sombra*, a short novel, in poetic prose, filled with the foreboding of death, and Francisco Coloane's *Golfo de penas*, four *relatos* whose style though uneven, is exciting and imaginative.

Colombia. Three volumes in the Colección Tierra Firme are by Colombian authorities: *Letras colombianas*, by Baldomero Sanín Cano, the dean of Colombian literary critics; Nicolás García Samudio's *La independencia hispanoamericana*, stressing the influence of our Declaration of Independence on Spanish American thought; *Este pueblo de América*, a study of the role of the common man in American history, by Germán Arciniegas, the most influential of Colombia's younger critics, who also wrote *Biografía del Caribe*. Aquilino Villegas' *Las letras y los hombres* is a posthumous collection of literary essays, and Ricardo Jaramillo Arango's *Al roce de los años* a charming volume of memoirs.

Germán Pardo García's *Las voces naturales* confirms the author's place among the major poets of Spanish America. Dario Restrepo Jaramillo's *De la angustia al silencio* is a volume of passionate, febrile lyrics. A promising talent is revealed in Guillermo Payán Archer's *La bahía iluminada*.

Three excellent volumes of short stories were published: Efe Gómez's *Guayabo negro*, Humberto Jaramillo Angel's *Temperatura*, and Antonio Cardona Jaramillo's *Corderilla. Fuera de la ley* is an exciting account of bandit life by the outstanding novelist, J. A. Osorio Lizarazo.

A great loss to Colombian, and American, poetry was the death, in July, 1944, of Guillermo Valencia.

Cuba. Cintio Vitier, in *Extrañeza de estar*, has written a remarkable, somnambulant poetic journey. Regino Pedroso, one of the great Afro-Cuban poets, dedicates his *Bolívar* to Venezuela and to freedom for all peoples. Special mention should be made of the excellent poetry in the quarterly review, *Orígenes*.

Juan J. Ramos y Rubio's *Historia de la literatura cubana* is a somewhat uneven, but exhaustive, reference work. Medardo Vitier's *Del ensayo americano* (Colección Tierra Firme) treats of American essayists and the essay as a literary form. Andrés Iduarte's *Martí, escritor* is a definitive study of Martí's poetry and prose. José Antonio Portuondo's *El contenido social de la literatura cubana* is a searching criticism by a thoughtful and socially-conscious critic. César Rodríguez Expósito's *Hatuéy* is the story of an Indian leader who gave his life trying to free his people from Spanish rule in 1511.

Dominican Republic. In *Matices*, one of the finest Dominican poets, Francisco R. Mejía, has collected the best of his poetry. Manuel del Cabral's *Chinchina busca el tiempo* is a volume of lyrical prose poems. Pedro Henríquez Ureña, whose *Literary Currents in Hispanic America* was mentioned earlier in this article, has made an authoritative study of the characteristic Spanish eleven-syllable line in *El endecasílabo castellano*.

Ecuador. Leopoldo Benítez Argonautas de la selva (Colección Tierra Firme) describes the jungle adventures of Francisco de Orellana, the conqueror of Ecuador. Proof of unusual poetic ability are two volumes by Adalberto Ortiz: *Tierra, son y tambor* and *Camino y puerto de la angustia*. An excellent collection of contemporary verse is Ricardo Ariel's *Antología de la última generación poética ecuatoriana. Lugar de origen* is a new

volume of poems by Jorge Carrera Andrade, one of the greatest contemporary poets. Two outstanding novelists have published works this year: Humberto Salvador, *La novela interrumpida*, and Alfredo Pareja Diez-Canseco, *El muelle*.

Guatemala. José Batres Montúfar, *Poesías*, is a memorial edition of the works of Guatemala's most famous poet, published in commemoration of the centenary of his death. The new quarterly, *Revista de Guatemala*, edited by the poet, Luis Cardoza y Aragón, is of first-rank importance among Latin American literary reviews.

Honduras. *Imaginación de México* is a collection of legends about Mexico, edited by the famous Honduran critic and bibliographer, Rafael Heliodoro Valle.

Mexico. The newly-created Premio Nacional de Ciencias y Artes was awarded to Alfonso Reyes for his *La crítica en la edad ateniense*, the crowning work in the author's series of studies on Greek culture. Reyes is Professor of Greek Culture and Literary Theory in the Universidad Nacional, President of the Colegio de México, one of the most influential cultural forces in America, and one of its most distinguished writers. His *La casa del grillo*, written in 1918 and republished this year, is a series of sketches of family life, described with all the author's wit and charm. The Premio Manuel Avila Camacho was awarded to Enrique González Martínez, Mexico's greatest living poet, the first volume of whose autobiography, *El hombre del buho: Misterio de una vocación*, appeared last year. The Premio Lanz Duret, the most highly prized award in fiction, was won by Jesús Goytortúa Santos for his *Pensativa*, a superbly written romantic novel.

Leopoldo Zea's *Apogeo y decadencia del positivismo en México* is the second volume of an exhaustive study of positivism and its misuse by the *científicos* of Porfirio Díaz. José Vázquez Amaral's *México, datos para su biografía* is a stimulating, though not completely successful, attempt to evaluate the role of Mexico in world history. *Letras mexicanas en el siglo XIX* (Colección Tierra Firme) is a brilliant critique by Julio Jiménez Rueda, one of Mexico's leading literary historians.

In the field of poetry, there is a definitive edition of the *Obras completas* of Manuel José Othón, one of the classic poets of the nineteenth century. Enrique Díez-Canedo's *Epigramas americanos*, published posthumously, contains all the epigrams of the great Spanish critic. Three volumes of new poems are especially noteworthy: Elías Nandino's *Espejo de mi muerte*, a collection of thirty sonnets, José Cardenas Peña's *Llanto subterráneo*, and Jorge González Durán's *Ante el polvo y la muerte*, which won the 1944 Premio Nacional de Literatura. Three literary reviews, *Letras de México*, *Cuadernos Americanos*, and *El Hijo Pródigo*, are publishing much of the best contemporary poetry of Mexico and other countries.

Two published plays won critical applause: Margarita Urueta's *Ave de sacrificio*, an Aztec tragedy of love, and Xavier Villaurrutia's *El yerro cantante*, a tragedy by Mexico's foremost playwright.

José Vasconcelos published *El viento de Bagdad*, a collection of his short stories and essays. *Dios en la tierra* is a volume of short stories by one of the most important young novelists of Mexico, José Revueltas. *Los perros fantasma*s and *Los hermanos Gabriel* are distinguished novels by the well-known essayist, Eduardo Luquín. In *El crímen de tres bandas*, Rafael Solana has again proved himself a master of the fantastic mystery story.

Three illustrious men of letters died in 1945: Joaquín Ramírez Cabañas, teacher and authority on Mexican history, the poet José Juan Tablada, and Rubén M. Campos, critic, poet, and novelist.

Peru. The Premio Nacional de Poesía was awarded to Jorge Eduardo Eielson for his *Antígona*, thirty brooding stanzas of poetic prose upon the tragedy of Antigone. The poems in Magda Portal's *Costa Sur* deal, in strict poetic form, with prison, workers, and *aprimo*.

In *El mundo que agoniza*, César Falcón, companion and follower of the great José Carlos Mariátegui, reflects upon the present agony of the world. Luis Alberto Sánchez, in *Nueva historia de la literatura americana*, has issued a corrected, better organized, and above all, better printed and bound, edition of his standard reference work. A posthumous collection of the works of an outstanding critic and historian is appearing in the *Obras completas* of Carlos Pareja Paz-Soldán. Luis Valcárcel's *La ruta cultural del Perú* (Colección Tierra Firme) is a penetrating analysis of the interplay of cultures throughout Peruvian history. *El tonel de Diógenes* is a posthumous collection of unpublished essays by the great critic and reformer, Manuel González Prada. Héctor Velarde's *Lima en picada* is delightful jesting on the foibles of Lima and the *limeños*.

Venezuela. Several volumes of poetry are noteworthy: Miguel R. Utrera's *Rescoldo*, Fernando Paz Castillo's *Entre sombras y luces*, Felipe Herrera Vial's *Clima de la gaviota y la esperanza*, Matías Carrasco's *Siembra en el viento*, Pablo Rojas Guardia's *Tropico lacerado*, and *Mensaje en siete cantos de la guerra y la paz y desde América*, a long poem by one of Venezuela's major poets, José Ramón Heredia.

De la conquista a la independencia (Colección Tierra Firme) is a survey of four centuries of colonial culture in Spanish America by Mariano Picón-Salas, Venezuela's most widely known critic. Raúl Agudo Freyre's *Andrés Bello, maestro de América* is an excellent study of the educational pioneering of the renowned Venezuelan critic and teacher. *Historia de rapaces* contains five short stories by Julio Rosales, one of the classic *cuentistas* of Venezuela. *Las visiones del camino* are vignettes of Mediterranean travel, written in 1918 by Arturo Usler Pietri, the distinguished author of *Las lanzas coloradas*. *Sobre la misma tierra* is a powerful novel by Rómulo Gallegos, whom many consider the greatest Spanish American novelist.

DONALD D. WALSH

LATTERDAY SAINTS, Church of Jesus Christ of. A religious body, commonly known as the Mormon Church, organized in 1830 at Fayette, N. Y., by Joseph Smith. In 1945 the organization included 154 stakes, 1,169 wards, 123 independent branches, and 38 missions, with a membership of 976,128. Accurate information regarding the missions in Europe and the Pacific has not been available for the past three years. However, at the present time there are 478 missionaries, practically all of whom are laboring in the United States. The administrative affairs of the church and the performance of all church ordinances are attended to by the priesthood consisting of the Melchizedek Priesthood, a senior order with 122,547 male members, and the Aaronic Priesthood, a junior order with 104,987 male members.

The church maintains eight temples which are devoted to sacred ordinances for the living and the dead, such as baptisms, endowments, and marriages. It also maintains the Brigham Young Uni-

versity, Ricks Junior College, Latter-day Saints Business College, Juarez Academy in Mexico, and 12 collegiate institutes. The auxiliary bodies include the Women's Relief Society numbering, in 1945, 102,610 members who care for the sick and the needy. The Sunday Schools, in 1945, had an enrollment of 342,954. The two Mutual Improvement Associations, composed of young people, had an enrollment of 117,805. The Primary Association for those under 12 had 127,960.

The Church holds in Salt Lake City, Utah, two general conferences each year, one during the first week in April, and the other the first week in October, at which the work of the general authorities is reviewed. The general authorities, as sustained at the 1945 October general conference were: First Presidency: George Albert Smith, President; J. Reuben Clark, Jr., First Counselor, David O. McKay, Second Counselor. Quorum of the Twelve Apostles: George F. Richards, President.

LAW. This review is limited to important developments during the past year in judicial decisions, legal procedure, and jurisprudence. For discussion of legislation and similar topics, the special title involved should be consulted.

War and International Law Decisions. For the first time in more than the century and a half of our national existence the Supreme Court had occasion to review a conviction for treason. Article III, Section 3 of the Constitution states that "Treason against the United States, shall consist only in levying War against them, or in adhering to their Enemies, giving them Aid and Comfort. No Person shall be convicted of Treason unless on the Testimony of two Witnesses to the same overt Act, or on Confession in open Court." Prosecution of the accused, Cramer, resulted from his association with two of the German saboteurs who in June 1942 landed in Florida from German submarines for the purpose of disrupting industry in this country and whose cases were considered in *Ex parte Quirin*, 317 U.S. 1. The overt acts were that Cramer talked and drank with the two saboteurs on June 23, 1942, shortly before their apprehension, at a tavern and at a cafeteria in New York City. There was no two-witness proof of what was said; nor any showing that Cramer gave them any information, shelter, or sustenance. "It is outside the commonplace overt acts as proved," said Mr. Justice Jackson for the majority in reversing, "that we must find all that convicts or convinces either that Cramer gave aid and comfort or that he had a traitorous intention." The dissent thought that Cramer's admissions, made when he took the witness stand in his own behalf, established that the overt acts were not accidental or casual conferences, but that these meetings were part and parcel of the treasonable project. Since levying war against the United States was not involved, the two elements of treason as applied to the case were: adherence to the enemy; and rendering him aid and comfort. In explaining these elements Mr. Justice Jackson stated: "A citizen intellectually or emotionally may favor the enemy and harbor sympathies or convictions disloyal to this country's policy or interest, but so long as he commits no act of aid and comfort to the enemy, there is no treason. On the other hand, a citizen may take actions which do aid and comfort the enemy—making a speech critical of the government or opposing its measures, profiteering, striking in defense plants or essential work, and the hundred other things which impair our cohesion and diminish our strength—but if there is no adherence to

the enemy in this, if there is no intent to betray, there is no treason." Adherence to the enemy, in the sense of a disloyal state of mind or treasonable intent, need not be proved by two witnesses, but the framers of the Constitution safeguarded the concept that thoughts and attitudes could not make a treason with the procedural two-witness rule to an overt act. In this and in other respects the framers departed from, and restricted, the crime of treason as established in England in 1351, 25 Edw. III, which after 600 years is still the living law of treason in that country. They had had too much experience with the sweeping English law and they "adopted every limitation that the practice of governments had evolved or that politico-legal philosophy to that time had advanced." And during our entire national existence not one execution on a federal treason conviction has taken place. *Cramer v. United States*, 325 U.S. 1. In addition to the extensive discussion of the law of treason contained in the opinions, see Hurst, *Treason in the United States*, 58 Harv. L. Rev. 226, 806.

Conviction of certain national and local leaders of the German-American Bund on a charge of conspiring to counsel evasion of the Selective Training and Service Act was reversed in *Keegan v. United States*, 325 U.S. 478, because of insufficient evidence. The Government's case was botched on Bund Command 37 which, while unequivocally directing registration under the Act, denounced § 8(1) of the Act expressing the congressional policy that any vacancy caused by induction of an employee should not be filled by a member of the Bund, and asserted further that "Every man, if he can, will refuse to do military duty until this law and all other laws . . . which confine the citizenship rights of Bund members are revoked." Concurring, Mr. Justice Black aptly states: "When we view the conduct of these defendants in all of this setting, their vigorous language appears to have been little, if any, more condemnatory of the discriminatory section of the Selective Service Act than language previously used by this Court with reference to legislation of a similar pattern." In *Markham v. Cabell*, 14 L.W. 4037, the Court in construing the Trading with the Enemy Act, passed Oct. 6, 1917, and subsequently amended several times, was required to determine what provisions were of permanent character, and hence became effective on the advent of World War II, and what provisions were temporary in character and applied only to World War I. It ruled that § 9(a) permitted an American citizen to sue the Alien Property Custodian on a claim originating in 1935 against an Italian corporation whose assets vested in the Custodian in 1942; that § 9(e), which barred claims that were not owing prior to Oct. 6, 1917, was a temporary provision pertaining to World War I claims and inapplicable; and that the supposed inequities of allowing suit on claims against enemy aliens while there was no provision for suits on claims against friendly foreign nationals, such as Denmark, Norway, Holland, and others, whose assets in this country were "frozen" and subsequently vested in the Custodian, would not defeat the right of suit clearly given against enemy aliens.

In the field of economic controls the Court sustained the Price Administrator's construction of his General Maximum Price Regulation that the highest price charged for delivery of an article or material during March, 1942, established the maximum price for subsequent sales, although the delivery was made pursuant to a contract entered into in October, 1941. *Bowles v. Seminole Rock &*

Sand Co., 325 U.S. 410. And ruled in *Mine Safety Appliances Co. v. Forrestal*, 14 L.W. 4048, that a suit to enjoin the Under Secretary of the Navy from directing government disbursing officers, pursuant to the Renegotiation Act, to withhold payments due plaintiff on other contracts, sufficient in amount to offset the government's loss due to the excessive profits, was basically a suit against the United States since it was essentially designed to reach money which the government owns and the suit could not be maintained without its consent. This ruling apparently forces all aggrieved contractors to seek redress before the Tax Court.

Turning to the international law and related fields, we find that in the consummation and subsequent interpretation of treaties with the Indians we have often disregarded principles of elemental justice. *Northwestern Bands of Shoshone Indians v. United States*, 324 U.S. 335, illustrates. The issue was whether the aboriginal or Indian title of the Northwestern Bands of Shoshones to extensive lands in the northwest was recognized by the United States in the Box Elder Treaty made in Utah Territory on July 30, 1863. After the discovery of gold in California, white travelers and settlers began to traverse and people the Shoshone domain with the result that the Indian's game disappeared. Indian depredations interfered with travel and settlement, the overland mails, and the new telegraph lines. By the time of the outbreak of the Civil War the Commissioner of Indian Affairs was aware of the Shoshone's misery, and the dangers to the emigrant trains and need for peace to enable travel and settlement in the area. The treaty, which skilled and educated commissioners sent from Washington effected with nomadic tribes of Indians (who could neither read nor write and were, of course, wholly ignorant of American property law and legal terms of art going back to the times of Lord Coke) is now interpreted by the Court, in a 5-4 decision, as buying peace from the Indians but without any recognition of their claim to the lands which they occupied. Justices Jackson and Black, concurring, recognized the moral rights of the Indians, but that "The white was a better killer"; appreciated that the conflicts between the Shoshones and the whites "sometimes leave one in doubt which side could make the better claim to be civilized"; and concluded that the Indian problem is essentially a sociological problem for Congress. The case for the Indians is ably stated in the dissent of Mr. Justice Douglas. "He who comes to my abode and bargains for free transit or a right of way across the land on which I live and which I proclaim to be my own certainly recognizes that I have a claim to it. That and more was done here. Routes of travel through this Shoshone country, the establishment of military agricultural settlements and military posts, and maintenance of ferries over the rivers, the erection of houses and settlements, the location, construction, and operation of a railroad, the maintenance of telegraph and overland stage lines were all negotiated. These provisions alone constitute plain recognition by the United States that it was dealing with people who had the power to grant these rights of travel and settlement. The United States, of course, did not need to follow that course. It could have invaded this Indian country and extinguished the Indian title by sword or by appropriation. . . . But it did not choose that course. It chose to negotiate a treaty." And concludes from the majority's interpretation of the treaty that "what these Indians did not lose to the railroads and to land companies they lost in the fine web of legal niceties."

Republic of Mexico v. Hoffman, 324 U.S. 30, denied Mexico's claim that a ship owned by it, but leased to and operated by a private Mexican corporation, was immune from arrest. The State Department had also refrained from recognizing the immunity. Extensive, and in part rather polemic, discussion of, and support for, the President's power to control foreign relations through executive agreements is found in McDougal and Lans, *Treaties and Congressional-Executive or Presidential Agreements: Interchangeable Instruments of National Policy*, 54 Yale L.J. 181-351, 354-615. An opposite point of view is set forth in Borchard, *Treaties and Executive Agreements—A Reply*, 54 Yale L.J. 616-664; see also Borchard, *Shall the Executive Agreement Replace the Treaty?*, 53 Yale L.J. 664.

Civil Liberties. Four cases of more than routine importance involved: the deportation order of Harry Bridges; the Texas statute requiring labor organizers to register; the subjection of state peace officers to federal prosecution for murder by them of a person in their custody; and the right of Illinois to deny admission of a conscientious objector to the bar. Congress in 1940 provided for the deportation of any alien who was "at the time of entering the United States, or has been at any time thereafter" affiliated with or a member of the Communist Party. After extensive hearings, the immigration inspector, Judge Sears, formerly of the New York Court of Appeals, found that Bridges, an alien and militant west coast labor leader, had both been affiliated with and a member of the Communist Party; the Board of Immigration Appeals found otherwise, the Attorney General then affirmed Judge Sears' findings and ordered Bridges' deportation; a federal district court denied Bridges' collateral attack made upon the order by habeas corpus proceedings and was affirmed by the Ninth Circuit. The Supreme Court, three justices dissenting, reversed on the grounds that the deportation order rested on a misconstruction of the statutory term "affiliation," and that Bridges had had an unfair hearing on the question of his membership in the Communist Party. This latter ground is taken in cavalier disregard of the Court's orthodox treatment of administrative hearings and findings, as the dissent points out. Mr. Justice Murphy, concurring with the majority, adopts the thesis that the statute violates the Bill of Rights and is unconstitutional. *Bridges v. Wixon*, 65 S. Ct. 1443. A Texas statute provided that a paid labor organizer should not solicit membership in a union until he filed a registration with the Secretary of State giving certain identifying information and statement of union affiliation; no fee was to be charged for registering; and upon the statutory information being furnished the Secretary was required to furnish the applicant an organizer's card. One Thomas, President of the International Union U.A.W., vice-president of C.I.O., and a labor organizer within the meaning of the Texas statute, was adjudged in contempt by a Texas state court for violating its order restraining him from soliciting membership in a union until he had complied with the statute. Reversing the Texas Supreme Court, which had denied his petition for habeas corpus, the United States Supreme Court, overriding the presumption in favor of constitutionality and the findings of the state Supreme Court that conditions exist in Texas which justify and require the statutory identification of paid organizers, holds the statute violative of the constitutional guarantee of free speech. Mr. Justice Jackson, concurring, makes this pertinent comment: "I must admit that

in overriding the findings of the Texas court we are applying to Thomas a rule the benefit of which in all its breadth and vigor this Court denies to employers in National Labor Relations Board cases. . . . However, the remedy is not to allow Texas improperly to deny the right of free speech but to apply the same rule and spirit to free speech cases whoever the speaker." *Thomas v. Collins*, 323 U.S. 516, noted in 33 Geo. L. Rev. 227, 31 Va. L. Rev. 691, 33 Calif. L. Rev. 317. State peace officers who, after arresting a Negro, wilfully beat him to death are subject to federal prosecution and conviction under 18 U.S.C. § 52 for depriving him under color of law of "rights, privileges, or immunities secured or protected by the Constitution," namely, the right guaranteed by the Fourteenth Amendment not to be deprived of life without due process of law. *Screws v. United States*, 325 U.S. 91 (conviction reversed for error in the charge which, under the circumstances, could hardly be said to be harmful). The Illinois Supreme Court's refusal to admit Summers to the practice of law on the ground that because of his convictions against violence he could not honestly take the required oath to support the Constitution of Illinois, which requires a willingness to perform military service, was affirmed. *In re Summers*, 65 S. Ct. 1307.

Other cases are important, not because virginal land is plowed, but because inroads upon well tilled areas are carefully prevented. Thus we find a unanimous affirmance of the New York Court of Appeals' ruling that the Railway Mail Association was a labor organization within the meaning of the New York Civil Rights Law, and that this law could constitutionally forbid such a labor organization from denying a person membership or equal treatment by reason of race, color, or creed. *Railway Mail Ass'n v. Corsi*, 65 S. Ct. 1483. The principle, noted in last year's review, that the right of an accused to a fair trial in State courts is guaranteed by the Fourteenth Amendment, is enforced. Counsel must be assigned to accused if he is unable to employ one, is incapable adequately of making his defense, and does not intelligently and understandingly waive counsel. *Williams v. Kaiser*, 323 U.S. 471. And this right of counsel is the right to effective counsel, coupled with adequate opportunity to prepare for trial. *Hawk v. Olson*, 66 S. Ct. 116. A state conviction which is the fruit of a forced confession, *Malinski v. New York*, 324 U.S. 401, or perjured testimony, known to be such by the prosecuting attorney, *White v. Ragen*, 324 U.S. 760, may not stand. And while the Fourteenth Amendment forbids any discrimination against a race in selecting a grand jury, a defendant has the burden of establishing such discrimination before his conviction will be reversed. *Akins v. Texas*, 325 U.S. 398.

Labor and Business. In addition to the *Bridges* and *Thomas* cases, *supra*, the decisional entries of the Court relative to labor are decidedly on the credit side of the ledger. This implies no criticism of the Court since in the main it is construing statutes clearly designed for the benefit of labor and properly must interpret them to achieve their objectives. The validity of Alabama's comprehensive statute regulating labor unions remains to be determined. This statute, recently enacted, establishes a Department of Labor, sets up mediation machinery, requires a labor organization functioning in the state to file various reports, financial statements, and a copy of its constitution and by-laws and a copy of similar documents of the national or international union, if any, to which it

belongs, and regulates some phases of the internal affairs and activities of labor organizations, and various aspects of picketing, boycotting, and striking. A labor union sought a declaratory judgment that this statute was unconstitutional; validity was upheld by the Alabama Supreme Court. The Federal Supreme Court granted, then dismissed the writ of certiorari because the record afforded inadequate factual basis for determining the grave statutory and constitutional questions raised. *Alabama State Federation of Labor v. McAdory*, 65 S. Ct. 1384; *Congress of Industrial Organizations v. McAdory*, 65 S. Ct. 1395.

The Court has safeguarded the substantial right to jury trial in actions brought by employees under the Federal Employer's Liability Act, whether in state, *Blair v. Baltimore & O. R. Co.*, 323 U.S. 600, or federal court, *Tiller v. Atlantic Coast Line R. Co.*, 323 U.S. 574. And has given a realistic interpretation to Federal Rule 15(c) so that amendments to complaints, which involve the same general conduct, transaction, or occurrence originally pleaded, may not be barred by the statute of limitations. *Tiller v. Atlantic Coast Line R. Co.*, *supra*. And while the Court adheres to the principle that it will not review judgments of state courts that rest on adequate and independent state grounds since its only power over state judgments is to correct them to the extent that they incorrectly adjudicate federal rights, it will hold decision of a Federal Employer's Liability Act case in abeyance until it is made to appear whether the state supreme court's dismissal of the action is based on a state, rather than a federal ground. *Herb v. Pitcairn*, 324 U.S. 117 (Suit under the federal act was begun in an Illinois city court; after the state supreme court had held in another case that a city court did not have jurisdiction over actions arising outside the city limits, the employee's suit was transferred to another Illinois state court having jurisdiction. The non-federal ground was whether the case could be transferred, assuming that it could be, the federal ground was whether the action was commenced for purposes of the statute of limitations, when suit was instituted in city court or when it was transferred to the state court having jurisdiction).

The Railway Labor Act marks out distinct routes for settlement of two classes of dispute: the first, or "major disputes," relate to the formation of collective agreements or efforts to secure them; the second, or "minor disputes," are those which inevitably appear in the carrying out of major agreements and policies or arise incidentally in the course of employment. "Major disputes" go first to mediation under the auspices of the National Mediation Board; if that fails, then to acceptance or rejection of arbitration, and finally to possible presidential intervention to secure adjustment. For their settlement the statutory scheme retains throughout the traditional voluntary processes of negotiation, mediation, voluntary arbitration, and conciliation. Compulsions go only to insure that those procedures are exhausted before resort can be had to self-help. In the settlement of "minor disputes" the Adjustment Board was created with jurisdiction to determine grievances and make awards concerning them, with judicial review and enforcements of awards expressly or impliedly provided in certain instances, the Board's decisions in other cases to be "final and binding." Monetary claims of employees for back pay alleged to be due them by their employer-railroad, under the terms of the contract governing hours of work and rates of pay, fall into the classification of "minor disputes," and the bargaining representa-

tive of the union does not have authority by virtue of the Act either to compromise and settle such claims or to submit them for determination by the Adjustment Board. Hence the Board's award against the claimants is not binding upon them, where they had no notice of and did not participate in the hearing preceding the award, absent a showing that the union representative who did appear had their authority to act for them. *Elgin, J. & E. Ry. Co. v. Burley*, 65 S. Ct. 1292.

Orders of the National Labor Relations Board have been consistently sustained: its cease and desist order may include within its terms the "successors and assigns" of the respondent employer, *Regal Knitwear Co. v. N.L.R.B.*, 324 U.S. 9; that the practice of an employer in precluding employees from wearing union steward buttons, and in enforcing a general plant rule against solicitation or the distribution of circulars so as to prevent employees, on their own time, from soliciting union membership or distributing union literature constituted unfair labor practices, *Republic Aviation Corp. v. N.L.R.B.*, 324 U.S. 793, noted in 13 Geo. Wash. L. Rev. 494 (the employer had forbidden the wearing of the union steward buttons so as to maintain a strict neutrality in union matters; the soliciting and distribution rules were general in character and not aimed directly at labor); that non-supervisory employees of two clothing alteration departments of a large department store constitute an appropriate unit for collective bargaining, and hence the employer's failure to bargain with the union which had been certified to it as the representative of the non-supervisory employees, and the employer's application to the National War Labor Board for a general wage increase applicable to all its employees and thus going over the head of the union representing the non-supervisory employees constituted unfair labor practices, *May Department Store Co. v. N.L.R.B.*, 14 L.W. 4042 (the non-supervisory employees, which were held to be an appropriate unit, were 28 in number and constituted the employees in 2 departments of the store; the store had approximately 5,000 employees and 350 departments). And the Court in *Inland Empire District Council, etc. v. Millis*, 65 S. Ct. 1316, refused, at the suit of an A.F.L. union, to set aside the Board's certification of a C.I.O. union as the bargaining representative. But where the Board secured a court decree directing enforcement of its order providing among other things, that employees be reinstated and given back pay according to the formula prescribed by the Board, and nearly two years later the Board sought partial vacation of such order and remand of the cause to it for trial of how compensation should be calculated on ground that certain facts produced by employers had created in the Board's mind an erroneous impression which a fuller disclosure would have removed, the Board's petition was properly denied. Public interest in the finality of court judgments so demands. *International Union of Mine, Mill & Smelter Workers, etc. v. Eagle-Picher Mining & Smelting Co.*, 325 U.S. 335, noted 45 Col. L. Rev. 779. Because the National Labor Relations Act protects the freedom to select bargaining representatives, the Court invalidated a Florida statute requiring any business agent of a labor union to pay \$1 for an annual license, to be withheld from one who has not been a citizen for ten years or has been convicted of felony or is not of good moral character, and requiring a union to pay \$1 and file an annual report of its name, officers, and location of offices, as applied to a business agent and the union of employees of a ship-

building company engaged in interstate commerce, where union and agent were enjoined from functioning until they had complied with the statute. *Hill v. Florida*, 65 S. Ct. 1373. Cf. *Thomas v. Collins*, 323 U.S. 516 (see *Civil Liberties*, p. 324).

Cases involving the Fair Labor Standards Act have very generally been in favor of its coverage and those who would enforce its provisions. The *Western Union* case is but an exception which proves the principle. Since the telegraph company was not forbidden by the Act from employing child labor as messengers, the courts may not enjoin it from transmitting messages while it continues such employment. *Western Union Telegraph Co. v. Lenroot*, 323 U.S. 490. See Radin, *A Case Study in Statutory Interpretation: Western Union Co. vs. Lenroot*, 33 Calif. L. Rev. 219; 8 U. Detroit L.J. 125. The Wage and Hour Administrator could, on the other hand, prohibit industrial homework as a necessary means of making effective a minimum wage order for the embroideries industry. *Gemsco, Inc. v. Walling*, 324 U.S. 244. The regular rate of pay may not be fixed by an employment contract at a point completely unrelated to the payments actually and normally received each week by the employees, for the purpose of avoiding the overtime pay provisions of the Act. *Walling v. Youngerman-Reynolds Hardwood Co., Inc.*, 325 U.S. 419 (applying the principle of *Walling v. Helmerich & Payne*, discussed in last year's review); *Walling v. Harnischfeger Corporation*, 325 U.S. 427. Neither the right to the basic statutory minimum wage, nor liquidated damages (an amount equal to the unpaid minimum wages and unpaid overtime compensation) may be waived by an employee subject to the Act, and in the absence of a bona fide dispute between the employer and the employee as to liability, an acceptance by the employee of a part of the amount due him coupled with a release by him does not absolve the employer from his statutory liability. *Brooklyn Sav. Bank v. O'Neil*, 324 U.S. 697, noted in 45 Col. L. 798. But an employee recovering minimum wages and liquidated damages is not also entitled to interest on the sums so recovered, since liquidated damages compensate him for the delay in payment of the minimum wages. *Ibid.*; *J. F. Fitzgerald Const. Co. v. Pedersen*, 324 U.S. 720 (holding also that construction company employees who repaired abutments or substructures of bridges on which were laid railroad tracks used in interstate transportation were "engaged in commerce" within the meaning of the Act). Employees working in the warehouse and central office of an interstate grocery chain store system are not "engaged in any retail establishment" and hence are within the coverage of the wage and hour provisions. *A. H. Phillips, Inc. v. Walling*, 324 U.S. 490. Since executive officers and administrative employees working in the central office building of the employer, a corporation engaged in the interstate distribution of milk and related products, were engaged in "production of goods for commerce," within the meaning of the Act, it was held that elevator men and other maintenance employees in such building were engaged in occupations "necessary to production of goods for commerce," and within the Act's coverage. *Borden Co. v. Borella*, 65 S. Ct. 1223. (The Chief Justice dissented: Congress did not "by a 'house-that-Jack-built' chain of causation bring within the sweep of the statute the ultimate causa causarum which result in the production of goods for commerce."). But maintenance employees of the owner of a 48-story New York office building, whose offices are leased to more than a

hundred tenants pursuing a great variety of enterprises, some local, some interstate, are not within the coverage of the Act. *10 East 40th Street Bldg. v. Callus*, 325 U.S. 578. In the portal to portal pay case, *Tennessee Coal, Iron & R. Co. v. Muscoda Local No. 123*, 321 U.S. 590, noted in last year's review, the Court held that underground travel in iron ore mines constituted work and hence was included in the compensable workweek within the meaning of the Act. *Jewell Ridge Coal Corp. v. Local No. 6167*, 65 S. Ct. 1063, 1550, decided that this same result must be reached as regards underground travel in bituminous coal mines. And the same liberal interpretation of the Independent Offices Appropriation Act in favor of the employee and against, this time, the Government as employer resulted in holding that a Panama Canal dredge operator was within the Act's coverage and entitled to time and one-half pay for hours exceeding 40 per week. *United States v. Townsley*, 323 U.S. 557.

Application of the anti-trust acts to labor has resulted in a chapter of troubled judicial decisions. The issue has been recently posed in this form: "Do labor unions violate the Sherman Act when, in order to further their own interests as wage earners, they aid and abet business men to do the precise things which that Act prohibits?" The question arose out of these circumstances. The members of an electrical union in New York City worked for local electrical manufacturers, and contractors who installed electrical equipment. To expand its membership, obtain shorter hours, increased wages, and enlarged employment opportunities for its members the union realized that local manufacturers must have the widest possible outlets for their product. Using conventional labor methods, such as strikes and boycotts, the union gradually obtained more and more closed shop agreements with both manufacturers and contractors in the New York City area. Agencies were set up composed of representatives of the union, manufacturers, and contractors to boycott recalcitrant local contractors and manufacturers and to bar from the area equipment manufactured outside its boundaries. The combination was highly successful. Manufacturers of electrical equipment, located outside of New York City but desiring to sell their products within that area, brought an action against the union to have its activities declared illegal and enjoined. The Court in sustaining the action reviews the legislation and judicial history. After the passage of the Sherman Act in 1890 sharp controversy arose as to whether this statute against monopolies applied to labor union activities. The federal courts adopted the view that it did and utilized the injunction to enforce it. Labor protested vigorously and many proposed measures were introduced in Congress. In 1914 Congress enacted the Clayton Act, which attempted to eliminate certain "trade practices" that injuriously affected interstate commerce; declared in the famous § 6 that "the labor of a human being is not a commodity or article of commerce" and that nothing contained in the anti-trust laws should forbid the existence and operation of labor unions; and limited the use of the federal injunction. Labor proclaimed this Act as its "Magna Carta." But the Court in the *Duplex*, 254 U.S. 443, and *Bedford*, 274 U.S. 37, cases, where the union had engaged in a secondary boycott, held that the Clayton Act exempted labor union activities only insofar as these activities were directed against the employees' immediate employers and that controversies over the sale of goods by other dealers did not constitute "labor disputes" within the meaning of the Clayton Act. In 1932 Congress passed the

Norris-LaGuardia Act, which greatly broadened the meaning of "labor dispute" as applied to the curtailment of the federal courts' jurisdiction to issue injunctions in such cases. Subsequently the Court held in *United States v. Hutcheson*, 312 U.S. 219, that the Sherman, Clayton, and Norris-LaGuardia Acts must be jointly considered and that the *Duplex* and *Bedford* cases were inconsistent with the policy set out in the three "interlacing statutes." The Court, nevertheless, now concludes that "Congress never intended that unions could, consistently with the Sherman Act, aid non-labor groups to create business monopolies and to control the marketing of goods and services." *Allen Bradley Co. v. Local Union No. 3*, 65 S. Ct. 1533. The doctrine of this case does not, however, subject a union to the Sherman Act for its refusal to admit to membership an employer's workers, although this makes it impossible for the employer profitably to continue in business. *Hunt v. Crumboch*, 65 S. Ct. 1545.

In the non-labor field, application of the anti-trust acts is also often complicated by the necessity to harmonize competing and overlapping policies. This is well illustrated by Georgia's suit to enforce the anti-trust acts against some twenty interstate railroad companies. Pursuant to the Supreme Court's procedure the matter arose on motion by Georgia for leave to file its complaint, charging that in violation of the anti-trust acts the defendants conspired to fix arbitrary and non-competitive rates and charges for transportation of freight by railroad to and from Georgia. Georgia alleged that its proprietary interests as owner of a railroad and various public institutions and the public interest in non-discriminatory freight rates, which it was entitled to protect as *parens patriae*, were injured. The Supreme Court sustained the State's motion. The following matters were resolved. Georgia has standing to sue to protect both its proprietary and the public interests; and is a "person" entitled to enforce the civil sanctions of the anti-trust laws. It may not, however, recover damages in this suit, since the legal rights of a shipper against a carrier in respect to a rate are to be measured by the published tariff until suspended or set aside, normally by the Interstate Commerce Commission, less frequently by the United States in a civil injunctive suit against the carriers, brought pursuant to the Clayton Act, for violation of the anti-trust laws. But the injunctive relief against the railroads conspiring to fix rates, which Georgia also sought, is not a matter subject to the jurisdiction of the I.C.C. While it is true that Georgia may not enjoin any established rate, it is nevertheless, entitled to remove from the field of rate-making the illegal influence of the carriers' combination, and this does not undercut or impair the Commission's primary jurisdiction over rates. The Supreme Court has original jurisdiction under Article III since this was a civil action, to which Georgia was a party plaintiff, and corporations, citizens of other states, were defendants. If two of the defendant corporations were citizens of Georgia they could be dropped from the suit. And the forum, the Supreme Court, is proper and convenient. *State of Georgia v. Pennsylvania R. Co.*, 324 U.S. 439. See 98 U. Pa. L. Rev. 442. Conflicting policies in the patent field have been resolved by holding that rights conferred by patent do not give a universal license against positive prohibitions, and are subject to the limitations of the anti-trust laws. *Hartford-Empire Co. v. United States*, 323 U.S. 386, 324 U.S. 570, noted in 45 Col. L. Rev. 601, 14 Fordham L. Rev. 91, 27 J. Patent Office Soc. 361.

The Government's suit against the Associated Press is another landmark case in this field. The by-laws of the AP forbade members to furnish news to non-members and required a member's competitor seeking membership to pay 10% of the total amount of the regular assessments received by AP from old members in the same competitive field since Oct. 1, 1900, and obtain a majority vote of members. A specially constituted district court, composed of three judges, sustained the Government's motion for summary judgment. It held that these by-laws violated the Sherman Act and enjoined their continued observance; and further held that a contract between AP and Canadian Press (a Canadian news agency similar to AP), under which the Canadian agency and AP obligated themselves to furnish news exclusively to each other, was an integral part of the restrictive membership conditions and its observance should be enjoined pending abandonment of the membership restrictions. The Supreme Court affirmed. Although the majority opinion is not pitched upon a public utility theory, in view of the fact that AP does not monopolize the field of news distribution as against UP and INS (comparable to AP "in size, scope of coverage, and efficiency"), and the implication of the decree that AP may not discriminate among applicants for membership, the inevitable result must be to force upon AP, UP, INS, and other such agencies, the duty to furnish news to all papers and thus subject them to the duties of a public utility. *Associated Press v. United States*, 65 S. Ct. 1416.

The effect of the Miller-Tydings amendment to the Sherman Act was considered in *United States v. Frankfort Distilleries, Inc.*, 324 U.S. 293. The Court held that while this amendment permits the seller of an article, which bears his trade-mark, brand, or name, to prescribe a minimum resale price by contract, if such contracts are lawful in the states where resale is made (as they were in Colorado, the state in question) and if the trade-marked article is in free and open competition with other articles of the same commodity, it does not permit combinations of business men to coerce others into making such contracts. In cases involving the Federal Trade Commission and its relation to the anti-trust acts the Court sustained the Commission's finding that a candy manufacturer's basic point price system resulted in discriminations in price between different purchasers of glucose so as to run afoul of the Clayton Act as amended by the Robinson-Patman Price Discrimination Act. *Corn Products Refining Co. v. F.T.C.*, 324 U.S. 726. And reached a similar result in *F.T.C. v. A. E. Staley Mfg. Co.*, 324 U.S. 746 (a Decatur, Ill. glucose manufacturer's delivered prices which included freight from Chicago, and practice of granting favored customers additional time to take deliveries, or lower prices constituted "price discrimination"). But while the Commission has authority to investigate, recommend, and report upon alleged violations of the Sherman Act by export associations, it does not have primary jurisdiction, and the Government can proceed independently and in the usual ways against such export associations for Sherman Act violations. *United States Alkali Export Ass'n v. United States*, 325 U.S. 196.

Decisions Concerning the Federal System. Distribution of power between the states and the federal government and between the states themselves is a continuing process of adjustment, a necessary incident of our federal system, and a matter to be delicately handled and intelligently resolved. Challenges to the power of the state to tax or the

method employed are quite consistently unsuccessful. Thus a foreign corporation which maintains resident salesmen in the State of Washington, who continuously and systematically solicit orders and sometimes use display rooms, is subject to Washington's unemployment tax based on the salaries paid such salesmen; and it is subject to suit by the State in its courts for the collection of the tax where process is served on one of its resident salesmen and a copy of the process is sent by registered mail to the corporation at its principal place of business. Both the tax and the procedure employed to reduce it to judgment were sustained against the claim that the taxpayer was denied the due process of law guaranteed by the Fourteenth Amendment. *International Shoe Co. v. Washington*, 14 L.W. 4032. In answering a challenge to the method of state tax assessments as discriminatory the Court stated that the Fourteenth Amendment's prohibition against the denial of equal protection of the law applies only to taxation which in fact bears unequally on persons or property of the same class and that mere differences in modes of assessment do not contravene the Constitution unless they are shown to produce such inequality. Nor does the equal protection clause prohibit inequality in taxation which results from mere mistake or error in judgment of tax officials; or which is not shown to be the result of intentional or systematic undervaluation of some but not all of the taxed property in a single class. *Charleston Federal Savings & Loan Ass'n v. Alderson*, 324 U.S. 182. Nor does the equal protection clause require the tax or rate of tax exacted from a foreign corporation as a condition of entry into the state to be the same as that imposed on domestic corporations. *Lincoln Nat. Life Ins. Co. v. Reed*, 325 U.S. 673 (Indiana corporation's business in Oklahoma held subject to that state's 4% gross premium tax, although domestic insurance companies were not so taxed). Where a state provided that a taxpayer could sue its department of treasury to recover taxes paid under protest, the waiver was held to apply only to suits in the state court, and hence the taxpayer could not maintain a suit in the federal court since such action was essentially against the State. *Ford Motor Co. v. Department of Treasury of Indiana*, 323 U.S. 459 (although objection that the State was being sued in violation of the Eleventh Amendment was first made in the Supreme Court).

State regulatory statutes have in the main received generous support. The due process clause does not assure protection against injuries remote, contingent, and speculative. Hence Washington's statute extending the time for the beneficiary of an award under the Industrial Insurance Act to apply for additional compensation on account of aggravation of his injury is valid, despite the possibility that in the future the employer might have to pay a larger premium into the industrial fund because of this. *Gange Lumber Co. v. Rowley*, 66 S. Ct. 125. The North Dakota Statute requiring corporations, within ten years, to dispose of farm land not necessary to the conduct of their business was upheld against attack under both the due process and equal protection clauses. *Asbury Hospital v. Cass County*, 66 S. Ct. 61 (on failure to comply with the statute the land is escheated to the county, sold by it, and proceeds paid to corporate owner). Extension in 1943 for another year of New York's mortgage foreclosure moratorium is not repugnant to the contract clause of the constitution. *East New York Sav. Bank v. Hahn*, 66 S. Ct. 69 (the original legislation, first enacted in 1933, suspended the right to foreclose for default in the payment of

principal for a year as to real estate mortgages executed prior to July 1, 1932; year by year (except in 1941 when a two-year extension was made the 1933 statute has been renewed for another year). Where, however, the federal interest, constitutional or statutory, is believed by the Court to be unnecessarily interfered with, state statutes have been invalidated. The Arizona Train Limit statute is an example. This law, adopted by the state as a safety measure, limited passenger trains to 14 cars and freight trains to 70 cars. It was held unconstitutional as an undue burden on interstate commerce in view of the showing that the state interest is outweighed by the interest of the nation in an adequate, economical, and efficient railway transportation system. *Southern Pac. Co. v. State of Arizona*, 65 S. Ct. 1515 (this conclusion receives support in the fact that after the institution of the suit and during the war the I.C.C., as of Sept. 15, 1942, felt it necessary to promulgate an order suspending the operation of state train limit laws for the war's duration). And it will be recalled that the labor registration statutes of Texas and Florida were invalidated: the former as infringing the constitutional guarantee of free speech, and the latter as repugnant to the National Labor Relations Act. (See *Thomas v. Collins* and *Hill v. Florida* noted, respectively, under Civil Liberties, and Labor and Business, *supra*). Furthermore the limitation upon state judicial power was pointed out in discussing civil liberties: state judgments of conviction may not stand where the elemental principles of fair play guaranteed by the due process clause of the Fourteenth Amendment have been violated. An additional limitation upon state judicial power is the full faith and credit clause. *Williams v. North Carolina*, 325 U.S. 226. This case holds that North Carolina in a bigamy prosecution is not required to recognize default divorce decrees which the defendants obtained in Nevada, where the now-defendants (plaintiffs in the Nevada divorce actions) were mere transients, not domiciled nor bona-fide residing in Nevada. For discussion, see Loreuzen, *Extraterritorial Divorce—Williams v. North Carolina II*, 54 Yale L.J. 799; also his article discussing the first *Williams* case entitled *Haddock v. Haddock Overruled*, 52 Yale L.J. 341, and 1 Moore's *Federal Practice Supplement* (1942) 196-202.

An accommodation of the federal judicial power to state substantive law is required, where the case is in the federal court because of the citizenship of the parties; and a state statute of limitations is a rule of substantive law and must be applied by the federal courts. *Guaranty Trust Co. v. York*, 65 S. Ct. 1464 (dictum in the case is subject, however, to criticism for perpetuating the equitable remedial rights doctrine under which the federal courts need not apply state law). Application of state law is ably discussed by Judge Clark in his Benjamin N. Cardozo Lecture entitled "State Law in the Federal Courts: The Brooding Omnipresence of *Erie R. Co. v. Tompkins*." See 114 N.Y.L.J. p. 1557.

The long arm of the federal government under the interstate commerce clause is well illustrated by the decisions discussed under Labor and Business, *supra*, dealing with the anti-trust acts, the National Labor Relations Act, and the Fair Labor Standards Act. Limitations upon this power applied to the regulation of local utilities are set forth in *Connecticut Light & Power Co. v. F.P.C.*, 324 U.S. 515, noted in 58 Harv. L. Rev. 1072.

Federal Administrative Law. Continuing the trend noted in last year's review, the Court has generally sustained federal administrative action. *Colorado Interstate Gas Co. v. F.P.C.*, 324 U.S. 581 (rate

order); *Panhandle Eastern Pipe Line Co. v. F.P.C.*, 324 U.S. 635 (similar); *Colorado-Wyoming Gas Co. v. F.P.C.*, 324 U.S. 626 (similar; order affirmed in part, and cause remanded for further findings relative to the balance of the order); *Otis & Co. v. S.E.C.*, 323 U.S. 624 (reorganization plan under the Public Utility Holding Act); *United States v. Pennsylvania R. Co.*, 323 U.S. 612 (I.C.C. could require railroads to interchange their cars with Seatrain Lines, Inc., a connecting water carrier; and its order fixing \$1 per car day as compensation to railroads while water carrier actually had cars in its possession was sustained); *I.C.C. v. Parker*, 65 S. Ct. 1490 (operational authorization to a railroad's motor carrier valid); and see cases noted *supra* under Labor and Business dealing with the N.L.R.B. and F.T.C.

Reversal has followed, however, where the commission has failed to follow the statutory procedure for notice and hearing, *Ashbucker Radio Corp. v. F.C.C.*, 14 L.W. 4029; excluded relevant and substantial evidence, *American Trucking Ass'n v. United States*, 65 S. Ct. 1499 (I.C.C.); made findings not adequate nor supported by evidence, *North Carolina v. United States*, 325 U.S. 507 (I.C.C.), *Alabama v. United States*, 325 U.S. 535 (I.C.C.); erred in construing substantive statutory provisions, *Connecticut Light & Power Co. v. F.P.C.*, 324 U.S. 515, *Barrett Line v. United States*, 65 S. Ct. 1504 (I.C.C.); or transgressed the policy behind the finality of judgments, *International Union of Mine, Mill & Smelter Workers, etc. v. Eagle-Picher Mining & Smelting Co.*, 325 U.S. 335.

Law Reform and Legal Education. Revision of the Judicial Code, which deals with the jurisdiction and judicial machinery of the Federal Court system is proceeding. Two preliminary drafts have been made public; at least another draft will be before the reviser's finished product goes to Congress for enactment. The Supreme Court's Advisory Committee on Rules of Civil Procedure still has under consideration proposed amendments to these Rules, which since 1938, their effective date, have significantly proved their merit in uniting the "law" and "equity" procedures of the Federal Courts and modernizing and simplifying federal practice. The proposed amendments are mainly clarifying, not basic in character.

Legal education during the war came to a standstill. Student enrollment materially decreased, in some schools to the vanishing point; some law schools closed their doors, all trimmed and reduced their faculties and activities to a bare minimum. With cessation of hostilities, a tremendous demand for legal education has arisen. All law schools, even those that normally accept limited numbers, are faced with the problem of accommodating more students than ever, due to the increasing interest in legal education and the backlog that has accumulated during the past five years. In addition, law schools face problems pertaining to returning veterans—readjusting them to scholarly pursuits and in many cases refreshing them as to legal materials covered prior to military service; the need to restaff depleted faculties, and to bring casebooks and other teaching materials up to date; and the necessity to keep the curriculum abreast of a swiftly moving society. (On this latter problem, see *The Place of Skills in Legal Education (Report of the Committee on Curriculum, Association of American Law Schools)*, 45 Col. L. Rev. 345.) The proper solution of these problems lies in giving due weight to scholarship, individual character, and integrity of him who would be a lawyer; and in properly evaluating the demands of an organized society

against the correlative rights of the governed. It demands a tolerant, visionary approach tempered with much practical judgment. The finest opportunity of a generation now lies before the law schools.

JAMES WAI. MOORE.

LEAD. The United States struggled through the final phases of the war and the early months of reconversion unable to mine or import sufficient lead to meet consumption requirements. At the end of 1945, lead was one of the three metals whose distribution still was controlled closely by the government, a far cry from the early days of the war when it was one of the few in excess supply.

Dwindling lead deposits yielded only 388,104 net tons of metal during the year (1944, 416,861 net tons; 1943, 453,313 net tons). As with other mining activities, shortage of manpower was a determining factor, and mine production was estimated to be only about 65 per cent of potential capacity. The southeastern Missouri district continued to be the largest producing area, accounting for about 45 per cent of the national output, with the far Western states together contributing about 45 per cent. The Coeur d'Alene district of northern Idaho was the largest Western producing region. The government sponsored premium price plan, under which the mines are paid a premium for mining ores which otherwise would be unprofitable, continued in operation, but is scheduled to end June 30, 1946. Thus, the mines received an average of 8.6 cents per lb. for lead produced during 1945 compared to a ceiling market price of 6.50 cents. It is estimated by Elmer W. Pehrson, chief of economics and statistics branch, U.S. Bureau of Mines, that lead ore reserves of the United States are sufficient to supply domestic consumption for only 12 years at the average 1935-39 annual rate of use. Imported ores in 1945 supplemented domestic ores to permit a production by United States refineries of 530,000 tons of refined and anthomonal lead.

Secondary recovery of lead from scrap was about 340,000 tons, the greater part of it from battery plates, during 1945. This was about the same as during 1944 and 1943, when 331,416 tons and 342,094 tons, respectively, were recovered.

Domestic refinery and smelter production was augmented by the importation of 230,000 tons of pig lead, about 75 per cent of it from Mexico and a substantial tonnage from Peru, Canada, and Australia. Some matte and concentrates came from Australia, Peru, Newfoundland, and Central and South American countries. Part of the Mexican and Peruvian metal production was diverted to Europe in the latter part of the year.

Domestic production and imports failed to meet a continued demand, and withdrawals from the government stockpile brought its level down to about 68,700 tons at the end of the year. Further withdrawals are probable in 1946, according to the Civilian Production Administration.

Difficulty in increasing imports lay principally in a world-wide shortage due to dislocation of producing areas. Silesian and Yugoslavian lead mines, which normally supply western Europe, have diverted their entire output to Russia. Little can be expected from Burma, whose railroads were destroyed by the Japanese.

CHARLES T. POST.

LEAGUE OF NATIONS. Three general objectives underlay League of Nations activities during 1945: first, to maintain as fully as possible the technical

and other services which had survived five years of war; second, to contribute out of the League's quarter-century's experience to the elaboration of the new United Nations agency; and third, to make ready for the transfer of its remaining activities and assets to that agency.

This latter problem became an active subject of negotiation during the year as World War II came to an end and a new international organization came into being. What to do about the innumerable duties entrusted to the League in several hundred treaties, the various territories around the world still under mandate by it, the superb buildings at Geneva, and the small but highly experienced staff which had remained steadfast during five years of war was a highly complex problem.

The outstanding event in the field of international organization was the San Francisco Conference for the creation of a new agency. The League, its affiliated agencies of Court and Labor Office, and two United Nations agencies were invited to send representatives, the first-named delegating its Acting Secretary-General, Sean Lester, its Treasurer, Seymour Jacklin, and its Senior Director, A. Love-day. League experience and work was constantly referred to throughout the conference, which agreed on a Charter very similar to the Covenant.

The Conference entrusted to the new agency's Preparatory Commission the duty to "formulate recommendations concerning the possible transfer of certain functions, activities, and assets of the League of Nations which it may be considered desirable for the new Organization to take over." The Executive Committee, meeting in London in August, worked out detailed recommendations which were approved by the full Commission in December and forwarded to the Assembly scheduled for January.

On the League side, the Supervisory Commission, which in the war years had met mostly in Montreal, returned to Europe for meetings in Geneva, Paris, and London, and considered all the aspects of this problem. At the same time, studies were issued on various aspects of League work bringing together the accumulated experience of two decades of international cooperation, including a complete review of the mandates system which was being paralleled in the United Nations trusteeship system, a compilation of a century's convention-making in the field of communications, and Volume 2 of the *Report of the Delegation on Economic Depression*. Three books by former Secretariat officials were issued by the Carnegie Endowment on the protection of national minorities by P. de Azcarate, the international secretariat by Egon F. Ranshofen-Wertheimer, and the organization of international conferences by Vladimir D. Pastuhov.

Certain technical work continued, though with changes, as in previous years. The first actual transfer of personnel from the League to the United Nations took place early in the year when the Health Research Unit in Washington became the nucleus of UNRRA's Epidemiological Information Service. The Anti-Narcotics work continued active, the two supervisory committees meeting in London but the staff gradually returning from Washington to Geneva. The largest and most important single group continued to be the Economic, Financial, and Transit Mission, which was in its fifth year at the Institute for Advanced Study in Princeton.

Several conferences also were held in connection with other international agencies working in fields associated with the League. The International Labor Organization initiated at Paris steps long

contemplated to make itself independent of the administrative links originally attaching it to the League, notably in the fields of finance, membership, and election. The United Nations Educational, Scientific, and Cultural Conference in London laid the basis of a larger and more formal agency than the League's Organization and Institute of Intellectual Cooperation. Another group met in Washington to lay the groundwork in the field of health, where the League had had great success, and still other steps were taken for the creation of an agency of commercial policy. In all this, League experience and often League personnel played an important part.

Finally, a revision of judgment as to the League was discernible in many quarters, particularly British and American. As the new agency was coming into being on lines very similar to the League but with a greatly strengthened membership, it became increasingly stressed that it could not succeed on its own but must have the support of all states, and particularly the big states, the lack of which was more and more recognized as the cause of the League's difficulties.

ARTHUR SWEETSER.

LEND-LEASE PROGRAM. Victory over Germany and Japan brought to a close the lend-lease program which began in March, 1941, and which contributed so much to the winning of the war. Negotiations with the countries which had received lend-lease aid were begun immediately for winding up their lend-lease programs including the sale to them of lend-lease goods then on hand or in the process of delivery.

From March 11 to May 2, 1941, Lend-Lease operations were handled by the President's Liaison Committee, headed by Maj. Gen. James H. Burns, in the Office of the Secretary of the Treasury. On May 2, 1941, the work of this committee was entrusted to the Division of Defense Aid Reports in the Office for Emergency Management. This Division had the job of coordinating the efforts of the various government departments concerned with the lend-lease program.

Since the program was rapidly growing in size and complexity, a separate agency—the Office of Lend-Lease Administration—was established on Oct. 28, 1941, with Edward R. Stettinius, Jr., as Administrator. The Office of Lend-Lease Administration acted as a sort of "holding company" for lend-lease activities. Its functions were policy making, coordinating, expediting, and record keeping. On Sept. 25, 1943, the President issued an executive order coordinating the civilian agencies operating in the foreign economic field, including the Lend-Lease Administration, in a new agency, the Foreign Economic Administration (q.v.) headed by Leo T. Crowley. The Foreign Economic Administration was abolished on Oct. 20, 1945, and lend-lease functions were transferred to the Department of State where they have been integrated with the disposal of surplus army and navy property abroad under the Foreign Liquidation Commissioner.

In order to integrate the entire war effort of the United States, procurement of lend-lease goods and services was handled by the regular Government procuring agencies—military goods and services by the War and Navy Departments, merchant ships by the Maritime Commission, the charter and hire of ocean transport by the War Shipping Administration, foodstuffs and agricultural commodities by the Department of Agriculture, and industrial and other nonmilitary products by the Procurement Division of the Treasury Department.

Other agencies concerned with the lend-lease program had the following responsibilities: the State Department for negotiating Lend-Lease Agreements with foreign countries; the Munitions Assignment Board for the assignment of munitions, the War Production Board for the allocation of industrial materials; the Petroleum Administration for War for the programming of the production and refining of petroleum products; and the Food Requirements and Allocations Committee of the War Food Administration for the allocation of foodstuffs. (See the articles on these agencies.)

Before the United States entered the war, Congress made all appropriations of lend-lease funds direct to the President. During the war it continued to make funds available in this manner for nonmilitary goods and services, but appropriated money direct to the Army and Navy for the munitions requirements of our Allies. As of V-J Day, a total of \$30,697,498,000 had been appropriated to the President. In addition, there had been authorized the transfer of up to \$35,970,000,000 of military goods and services procured with appropriations to the Army, Navy, and Maritime Commission.

By the end of the war, the President had declared the following countries eligible for lend-lease aid: Argentina, Belgium, Bolivia, Brazil, British Commonwealth, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, France, Greece, Guatemala, Haiti, Honduras, Iceland, Iran, Iraq, Liberia, Mexico, Netherlands, Nicaragua, Norway, Panama, Paraguay, Peru, Poland, Saudi Arabia, Turkey, U.S.S.R., Uruguay, Venezuela, Yugoslavia.

Lend-lease accounted for about 15 per cent of the total United States war expenditures. From Mar. 11, 1941, to Dec. 1, 1945, lend-lease aid—goods transferred and services rendered—totaled \$49,096,000,000. Of this amount, \$1,519,000,000 was furnished in 1941, \$7,184,000,000 in 1942, \$13,748,000,000 in 1943, \$15,144,000,000 in 1944 and \$11,501,000,000 in 1945.

Transfers of munitions accounted for 47 per cent of the total, industrial items for 22 per cent, petroleum products 5 per cent, and foodstuffs and agricultural products 13 per cent. Eight per cent consisted of services rendered. These services included the repair of United Nations vessels in American shipyards, the charter and hire of merchant ships to carry lend-lease goods, the ferrying of aircraft, and the training of United Nations pilots in this country. Charges not distributed by foreign governments accounted for the remaining 5 per cent.

From Mar. 11, 1941, to Dec. 31, 1945, shipments of lend-lease goods totaled \$32,881,000,000. Of this, \$13,889,000,000 went to the United Kingdom; \$9,554,000,000 to the U.S.S.R.; \$3,406,000,000 to Africa, the Middle East, and the Mediterranean Area.

Approximately 98 per cent of all lend-lease aid was sent to our four major fighting partners—the British Commonwealth, the Soviet Union, France, and China. Lend-lease shipments to the various European war theaters totaled \$28,000,000,000. This included shipments to the United Kingdom, the Soviet Union, Africa, the Middle East, the Mediterranean area, and continental Europe.

Shipments to the United Kingdom comprised munitions for offensive action against the enemy, industrial materials for the fabrication of military goods, and foodstuffs for soldiers and war workers. Munitions accounted for 50 per cent of total ship-

ments, industrial items for 25 per cent, and food-stuffs and other agricultural products the remaining 25.

Shipments to our Pacific Allies for the war against Japan totalled more than 4 billion dollars. The Asiatic and Pacific theaters received 8,800 lend-lease planes, more than 3,200 tanks, and 210,000 motor vehicles.

Among the finished munitions sent to Soviet Russia, there have been over 14,600 planes (more than to any other lend-lease country), 7,000 tanks, 135,000 sub-machine guns, and 487,000 motor vehicles. We have also sent for the Russian armies 422,000 field telephones and 1,105,000 miles of field telephone wire for the maintenance of their long lines of communication.

We sent to the United Kingdom under lend-lease, from the beginning of the program in March 1941 to Sept. 30, 1945, 10,700 planes, 12,750 tanks, 95,000 motor vehicles, 47,000,000 tons of petroleum products, 7,500,000 tons of iron and steel, 590,000 tons of nonferrous materials, 1,155,000 tons of fertilizer and 7,078,000 tons of food.

In addition to goods shipped to the various theaters of war, lend-lease helped to develop and maintain the supply lines of the United Nations. Many ships built in the United States with lend-lease funds were transferred for the duration to Great Britain, the U.S.S.R., and other United Nations. Air routes were developed from the United States to the Middle East, U.S.S.R., India, and Australia. Lend-lease financed in varying degree the construction of pipelines, supplying depots, docks, warehouses, railroads and rolling stock, and plane and truck assembly and repair shops.

Reverse Lend-Lease. In keeping with the concept of lend-lease as a pool of resources to which each of the United Nations contributes according to its ability, our Allies furnished under reverse lend-lease to July 1, 1945, goods and services amounting to \$6,256,871,000.

Reverse lend-lease aid from the United Kingdom to July 1, 1945 had a dollar value of \$4,220,000. From the day our soldiers first arrived in the United Kingdom in 1942, one-third of all the supplies and equipment required by United States troops in the British Isles was thus provided.

In addition to the tonnage of supplies and equipment for our forces, reverse lend-lease aid from the United Kingdom included new construction for United States Air and Ground Force bases, camps, supply and repair depots, and other installations. Almost one-third of Great Britain's total building labor force was at one time employed on this program. Services included not only the transportation of hundreds of thousands of American soldiers in British ships across the Atlantic, together with repairs, fuel and stores for our ships in British ports, but also the cost of the telephone, telegraph, postal, radio, railroad and other transportation and communication services in the United Kingdom.

Reverse supplies from Australia and New Zealand totaled \$1,039,570,000 up to July 1, 1945. The total in India was \$639,443,000 to July 1, 1945.

See GREAT BRITAIN under Anglo-American Relations; PROCUREMENT DIVISION; UNITED STATES under Enactments; also, the countries involved under Events, especially Australia, El Salvador, New Zealand, Turkey.

THOMAS B. MCCABE.

LIBERAL PARTY. A political party organized in New York State, May 19, 1944, by members of the right wing of the American Labor Party (who had lost

control of that Party to a coalition of the left wing) and other affiliated groups. John L. Childs is State Chairman; David Dubinsky is First Vice-Chairman; and Joseph V. O'Leary is Secretary.

LIBERIA. A Negro Republic, founded in 1847 by freed slaves from the United States, on the west coast of Africa between Sierra Leone and the Ivory Coast. Capital, Monrovia (population, about 10,000).

Government. The frame of government is modeled after that of the United States. There is a President and his Cabinet, a Senate and a House of Representatives. The President, elected in 1943 for the term 1944-52, is William V. S. Tubman of the True Whig Party. This party is controlled by a small oligarchy of American-Liberian families dwelling in the few coastal cities, for the franchise is restricted to Negro landowners. This party has pretty well monopolized political power in the Republic for the last three generations. The real natives of the country have little or no voice in the national administration.

In recent years the government's revenue has exceeded expenditures, the relevant figures for 1943 being \$1,429,936 and \$1,044,647 (in 1942 the exchange rate was fixed at \$4.80 to the Pound, or \$4 United States currency). Customs receipts account for half of the income; while debt charges, interest and amortization absorb one-fifth of the outgo. Under the terms of the Loan Agreement with the United States, Librarian finances are supervised by American experts. A first charge on all revenues is the service on the American loan. The external bonded debt as of Jan. 1, 1944 was \$1,193,000.

The armed forces consist of a militia of some 4,000 men and an enlisted Frontier Force of over 1,200. According to an agreement signed on March 31, 1942, the United States Government undertook to extend financial and technical assistance for organizing Liberian defense forces. Liberia also permitted the United States to exercise military control over certain of the country's airfields and defense areas. American troops arrived in Liberia in May 1942 to aid in defending the Republic for the duration of the war. Another agreement, signed on Dec. 31, 1943, implemented these previous commitments. Various technical missions and experts from the United States have been employed by the Liberian Government in recent years (see YEAR BOOK for 1944).

Events, 1945. The end of the war inevitably reduced the strategic and economic importance which Liberia had enjoyed during hostilities. That her wartime role had been important was emphasized by the American Secretary of State, Mr. Stettinius, when he visited Monrovia in mid-February en route from the Yalta meeting to the Mexico City Conference. He particularly mentioned the Republic's rubber production as a vital element in Allied success.

In November the Firestone Company announced that the rubber crop for 1945 was expected to total 41,000,000 pounds, an increase of 4,000,000 over 1944. According to this statement, 80,000 out of the 200,000 acres leased in Liberia had already been cleared and planted with some 10,000,000 rubber trees. Altogether there were 55,758 acres of producing trees. These plantations employed 25,000 native workers, under the supervision of 150 "staff men."

On April 2 the Liberian delegation to the San Francisco Conference arrived in New York, led by Vice-President Clarence L. Simpson and including

the Secretary of State, Gabriel Dennis. At San Francisco the delegation defended the rights of small nations and supported proposals for internationalizing the administration of colonial areas.

On Sept. 13 an examiner for the United States Civil Aeronautics Board recommended that Pan American Airways, which had already pioneered transatlantic services to Africa, be given the sole right to fly an American route to South Africa via the Azores and Monrovia. This was hailed in Liberia as assuring to the Negro Republic a place on one of the world's principal airways.

Characteristics of the Population. No proper census has ever been taken, and the population is estimated at anywhere from one to two million. Only about 60,000 of the coast Negroes are considered civilized by European standards. Among them are some 12,000 American-Liberians—the descendants of freed slaves from the United States—who form the governing and intellectual class. The natives are divided among six principal stocks and various smaller tribes. The Mandingoes are Moslems and most of the rest are pagans, though various Christian missions are operating in the country. English is the language of government and commerce. In 1944 there were 190 schools (78 run by the Government), of which two were of college rank. The great mass of the Liberian people is illiterate and wholly innocent of any formal education.

Economy. Most of the inhabitants, living in a tribal state, participate little or not at all in the world's money economy. Such resources as the country possesses are largely undeveloped. Almost the only export is raw rubber, produced on the Firestone plantations and shipped out through the port of Marshall, east of Monrovia. In 1943 exports were valued at \$8,997,896 and imports (largely manufactured goods) at \$4,679,602. There are no railways and very few roads, though the latter are being extended here and there, and no interior telegraph or telephone communications. There are several ports, but none with facilities for servicing vessels at docks; all operations are carried on by lighter. In 1943 the number of ships entering these ports was 63, of which 49 were American.

ROBERT GALE WOOLBERT.

LIBRARY OF CONGRESS. Dr. Luther Harris Evans, the Chief Assistant Librarian, assumed the duties of Acting Librarian after the resignation of Mr. Archibald MacLeish, the Librarian of Congress, in December 1944 to accept an appointment as Assistant Secretary of State. The Senate unanimously confirmed President Truman's nomination of Dr. Evans on June 18 and the new Librarian entered office as the tenth Librarian of Congress on June 29.

The Library's major problem centered on obtaining materials reflecting the Government's war program. With the war's end, the problem developed into one of acquiring publications that were inaccessible during the war. With this aim the Library attempted, through cooperative enterprise, to secure all pertinent foreign materials covering the war period for its collections and for other collections in the country.

To promote greater Pan-American cooperation and common knowledge, the Library established and published the first two issues of *The United States Quarterly Book List* under the editorship of Dr. Joseph P. Blickensderfer. This was in accordance with a recommendation included in the Final Act of the Inter-American Conference for the Maintenance of Peace, held at Buenos Aires in 1936, that each American Republic issue a quarterly devoted to recently published works in sci-

ence, history, literature, and art, to be distributed and exchanged among the American Republics.

In celebration of the twentieth anniversary of the establishment of the Coolidge Foundation in the Library of Congress, the Foundation sponsored its tenth festival of chamber music. Three new ballets by Aaron Copland, Paul Hindemith, and Darius Milhaud, a "Partita" for organ and strings by Walter Piston, all commissioned by the Foundation, and two works for two pianos—a "Sonata" by Igor Stravinsky and "Second Avenue Waltzes" by Vittorio Rieti—received their world premières. The Copland ballet "Appalachian Spring," received the Pulitzer Prize for the outstanding American composition of the year and citation as the best theatrical work of the season.

A program of Grants-in-Aid for Studies in American History and Civilization was established by the Library on the basis of a subvention from the Rockefeller Foundation.

An important initial step toward the establishment of the proposed Slavic Center was afforded by a grant of \$47,800 from the Rockefeller Foundation.

Special books and talking book machines for the use of veterans in hospitals and for the continuation of this service in their homes resulted from a series of conferences on the use of the Library's facilities for the Adult Blind Division in the program for the rehabilitation of war-blinded servicemen.

To save time and work, the Library of Congress established a library, as desired by the Department of State, for the United Nations Conference on International Organization at San Francisco. Delegations of all participating nations were permitted to use the resources of this library, containing 3,000 basic volumes supplemented by inter-library loans from cooperating libraries in the area. The function of the conference library was unique; there was no previous record of a special library service for the use of all delegations to an international conference.

The collection of the Library, at the end of the fiscal year, June 30, 1945, included 7,877,002 printed books and pamphlets, 1,703,599 volumes and pieces of music, 1,639,505 maps and views, 575,083 fine prints, 936,412 photographic negatives, prints, and slides, more than 7,900,000 manuscripts, 43,343 microfilm reels and strips, 11,955 motion picture reels, and 123,134 phonographic recordings.

LIBRARY PROGRESS. With the end of World War II, libraries and librarians throughout the nation attacked the problems of demobilization, readjustment, reconversion, and international relations for a postwar world. One of the major problems ahead continued to be the extension of libraries to areas without them. Although, according to the annual report of the Library Extension Board of the American Library Association, the number of people in the U. S. unserved by libraries was reduced from 45,069,897 in 1920 to 34,748,334 in 1945, nearly 26% of the U. S. population were still without libraries.

Many thousands of schools were also without libraries.

Extension of Library Service. Considerable progress has been made in the United States and Canada, however, since the A.L.A. Library Extension Board was established twenty years ago. Advances in state, federal and local legislation, more generous appropriations, and the development of large-unit libraries mark progress within

this period. State aid appropriations were made for the first time in 1945 in Washington, Maryland, New Mexico and South Carolina. Appropriations for state library extension agencies were generally increased (in several states more than 50 percent) and a small first appropriation was made in Montana.

Libraries, Librarians and the Negro (School of Library Service, Atlanta University, 1944) states that in the Southern states service to Negroes is now promised by 121 public library systems giving library facilities to 25.2 percent of the Negroes whereas in 1926, 55 public library systems provided service for 11 percent of the Negro population. The service increase is in the urban areas.

Work and activities of libraries and the American Library Association in connection with these problems are reported in more detail in the 1945 issues of the *A.L.A. Bulletin*, *College and Research Libraries*, and the *Library Journal*.

Federal and State Relations. In recent years the interest of libraries in Washington affairs has grown. They have been concerned with work relief projects, information programs relating to war and peace, legislation and government regulations affecting library service. During the war, war-information centers in libraries were an effective means of diffusing essential information of a more substantial kind than was easily available elsewhere. Government agencies urged people to "consult your library" in connection with information on peace policies and programs. Much planning and work went into the preparation for maximum library information-and-education service for returning veterans and for newly dislocated war workers, into planning for library use of surplus property, for possible public works legislation, and for other forms of federal assistance in state and local library service. In order to carry on these and other projects librarians, through the American Library Association, set out during the year to raise a Library Development Fund of \$105,000 and with the proceeds established in October, 1945 an A.L.A. National Relations Office at 1709 M St., N.W., Washington 6, D. C., with Paul Howard, formerly librarian of Gary, Ind., as director.

Among the activities of the Library Service Division of the U. S. Office of Education and of the American Library Association were efforts to maintain favorable book postage rates for libraries. It is estimated that agreements reached will prevent an additional annual charge of more than \$100,000 in postal rates on library book orders.

Professional Training and Personnel. During the year A.L.A. queried some 1,400 of its members in the armed forces, and in Army and Navy library services, on their impressions about their own future and the future of libraries. The answers indicated that most of them wished to return to library work, that they expected higher salaries, better working conditions, more opportunity for creative work, and advancement. Many want refresher courses before returning to regular jobs (some expect to take advantage of the G. I. Bill of Rights for library training) or suggest in-service training.

The A.L.A. Board of Education for Librarianship has given special attention to the redirection of professional education in line with changing requirements for librarianship; to the need of recruiting more personnel for the profession and more scholarships in library schools; to certification; to accreditation; and to the needs of veterans for orientation or other special courses.

The demand for trained librarians continued to be greater than the supply even though there was a slight increase in salaries and in the number of students enrolled in the 32 accredited library schools in the U. S.

International Relations. Much has been done during the year by American librarians toward assisting librarians and libraries in Latin America, China, and devastated European war areas. Of particular importance in 1945 were the place of education and cultural relations in the San Francisco charter; libraries and the proposed Educational and Cultural Organizations of the United Nations; disposal of surplus Army books abroad; the Book Campaign for devastated libraries in war areas; the planning for international indexes and bibliographies; importation of foreign books and periodicals; re-establishment of exchange between universities and other scholarly organizations in the U. S. and abroad; U. S. help in the rehabilitation of foreign libraries and library schools; interchange of librarians with foreign countries; and the maintenance of U. S. information libraries in foreign countries. Those administered by the OWI were transferred to the U. S. Department of State when the war ended. In addition, there have been many campaigns conducted by various nationality groups, to collect American books for specific countries of Europe. It is hoped that independent campaigns for books will be merged with that of the American Book Center, Inc., which was organized to coordinate all efforts in behalf of all countries where libraries have suffered through the war.

Books and Reading. The Council on Books in Wartime increased its service editions of books to 140,000 copies each of 32 titles published monthly and sent to the armed forces overseas and to Army and Navy hospitals in the U. S. The Library Section of the Special Services Division, Army Service Forces, reported a tremendous increase in the desire of American fighting men to read books. Although the Army had increased the supply of books from 20,000,000 to 50,000,000 a year there still were not enough.

The average American civilian was reading about his own personal problems first and about the war and the state of the world second, according to a survey of reading trends in over a hundred public libraries, conducted by the American Library Association. There was an increase in the circulation of books by libraries. For the first time since the U. S. began to prepare for war, libraries reported that the steady drop in circulation of books has ceased. The use of libraries for reference and information has never dropped and is still increasing.

An experiment in cooperative public opinion testing, "Do People Use Their Public Libraries," was completed during the year through the cooperation of the A.L.A., 17 libraries in metropolitan areas, and the National Opinion Research Center. Results were published in the *A.L.A. Bulletin* for Nov. 1945.

Grants, Gifts, and Buildings. A total of \$590,000 was received by the A.L.A. in grants ranging from \$1,000 to \$105,000 for some 25 special projects during the fiscal year ending Aug. 31, 1945. In addition, grants and funds of varying amounts have been made available by different groups and foundations to many libraries for specific purposes.

Private collections and funds given to libraries included: to Stanford University Library, the Hutton Webster Folklore Collection; to the library

of Southern Illinois Normal University, a Lincoln and American history collection donated by Clint Clay Tilton; to University of Illinois Library, a 6,000 volume economics library from Janet Weston, in honor of her father; to Minneapolis Public Library, \$50,000 from the Citizens Aid Society; to Columbia University Library, a collection of classics and incunabula from the late Dr. Gonzalez Lodge; to The Free Library of Philadelphia, 17th century Shakespeare folios by P. A. Widener and Mrs. Josephine Widener Wichfeld; to Texas Christian University Library, de luxe limited editions of American, English, and French literature and history from Mrs. Goodall H. Wooten; to the town of Muscoda, Wis., the library, home and personal property of Dr. Charles R. Pickering; to the Tulsa Public Library, the Diggs library of classical literature and history by the Tulsa Jewish Community Council; to the University of Arizona Library, several thousand books, valued at over \$10,000 from the Friends of the Library; to the Princeton (Ill.) Public Library, \$10,000 from the estate of Alfred Norris; to the Montezuma (Ind.) Public Library, the library and art collection of the late Lula J. Case; to the Macalester College Library (St. Paul) the greatest collection of America hymnology in the U.S., from Arthur Billings Hunt; and to the Library Association of Portland (Ore.) a bequest of income amounting to about \$2,500 a year for books from the will of Thomas Roberts.

Funds given for buildings included: to Newark (Ohio) Public Library, \$27,500 under the will of Mrs. Jessie Clark Thomas, to Cairo (Ga.) Public Library, \$35,000 by the Roddenberg family; to the Kewanee (Ill.) Public Library, a \$25,000 trust fund in memory of Edward Poole Lay, to the Jewell (Ia.) Public Library, \$25,000 for the establishment of the E. W. Montgomery Memorial Library; to the Avon (Mass.) Public Library, \$82,000 from the will of H. Lawton Blanchard; to Princeton University, \$1,000,000 from the Firestone family toward a \$3,500,000 Harvey S. Firestone Memorial Library; to the Elmwood (R.I.) Public Library, \$100,000 through the will of Mrs. Sophie Knight Rousmanieve; to the Pomeroy (Wash.) Public Library, \$10,000 from Mary Liggett; to Walla Walla (Wash.) Public Library, \$20,000 by the will of T. C. Elliott; to Lake Geneva (Wis.) Public Library, \$100,000 from Mrs. Mary Gridley Bell; to Bradley Polytechnic Institute, Peoria, Ill., \$37,500 from Friends of the Library for a new library building; to the Birmingham Public Library, a residence and funds for a branch library from Dr. and Mrs. Thomas D. Parker; to Florence, Ala., \$25,000 from the Rosenbaum family plus \$11,000 and local buildings from other individuals for a city-county library building and a bookmobile for rural service from the American Legion post; and to Baldwin-Wallace College, Berea, Ohio, \$152,000 from George W. Ritter for a library building; to the Technological Department of the Carnegie Library of Pittsburgh, \$66,195 from the Pittsburgh chapter of the American Chemical Society to supplement regular book funds.

Very little new library construction has been done during the war years but plans for buildings are being made by many libraries. The following are among those with funds available for buildings: Oakland (Calif.) Public Library, California Academy of Science, Paine College Library (Augusta, Ga.), University of Iowa Library, Forbes Library (Williamstown, Mass.), Cincinnati Public Library, and San Diego Public Library. Many war memorials will take the form

of library buildings or book collections, including the national memorial to Ernie Pyle in Dana, Indiana.

Publications. Among the books published by the A.L.A. in addition to its five regular periodicals were, *School Libraries for Today and Tomorrow*, *Librarian and the Teacher of Home Economics*, *Catalogers' and Classifiers' Yearbook No. 11*, *Patrons Are People*, *Activity Book No. Two*, *Buying List of Books for Small Libraries*, 7th ed., and *Books Published in the United States, 1939-43*. During the fall of 1945 the A.L.A. began the distribution of phonograph recordings of classic children's stories told by Mrs. Gudrun Thorne-Thomsen. This project is in cooperation with the A.L.A. Division of Libraries for Children and Young People, which is interested in the preservation of fine examples of the storyteller's art.

Among the books in the library field issued by other publishers were: Carnovsky and Martin, eds., *The Library in the Community* (University of Chicago); Rider, *The Scholar and the Future of the Research Library* (Hadham); Lydenberg and Archer, *The Care and Repair of Books* (Bowker); Rankin, *Children's Interests in Library Books of Fiction* (contributions to Education No. 906, Columbia University); Hackett, *Fifty Years of Best Sellers, 1895-1945* (Bowker); Davis, *Pictorial Library Primer* (Demco Library Supplies); Frederic G. Melcher, *Friendly Reminiscences of a Half Century Among Books and Bookmen* (Book Publishers' Bureau); and Wilson and Tauber, *The University Library: Its Organization, Administration and Functions* (University of Chicago).

See also *Library Association, American (A.L.A.)* under *Societies and Associations*.

MILDRED OTHMER PETERSON.

LIBYA. An Italian possession in North Africa, conquered by Allied forces under General Montgomery in the winter of 1942-43. Area, 679,358 square miles; population (January 1, 1939) 888,401. Of these 763,179 were Moslems, 30,046 Jews, 89,098 Italians, and 6,078 other Europeans (including many Maltese). By 1943 hardly any Italians remained in Cyrenaica (the eastern part of Libya), while some 40,000 remained in Tripolitania (the western part). Capital, Tripoli.

The Fascist regime divided the country into four coastal provinces—Tripoli, Misurata, Bengasi and Derna—and a Military Territory of the South comprising the very sparsely inhabited desert interior. In 1939 the four provinces were incorporated into the national territory of Italy. However, full citizenship was not awarded to the native population. Various other political, economic, and cultural discriminations were also enforced against the natives and in favor of Italian colonists. Libya is now under British military administration.

By 1939 much of the internal economy and foreign trade of Libya had become artificial as a result of Fascist autarchic policies. The region is devoid of any important natural resources, mineral or otherwise. Only under the impetus of large-scale government-spending programs could Libya's agriculture be made to produce exportable surpluses of cereals, fruits, and vegetables. The colony's foreign trade was largely with Italy, the latter accounting for over 90 percent of both its imports and exports. (See *YEAR BOOK* for 1943, page 337, for latest available statistics.)

Events, 1945. The Italian Government, whether presided over by Ivanoe Bonomi or by Ferruccio Parri, continued to ask the United Nations not to

divest their country of its North and East African colonies acquired before the advent of Fascism. However, on Jan. 17 Foreign Secretary Anthony Eden reaffirmed to the House of Commons his declaration of Oct. 4, 1944, that "the Italian Government had no right to the return of any one of their colonies." The British Government was even more definitely committed against the retention of Italian sovereignty over Cyrenaica.

The Conference of Ministers of the Big Five, which began its meetings in London on September 10, had as one of the first items on its agenda the framing of a treaty of peace with Italy. This would of course have involved the question of what was to be done with Libya. Among the possibilities were the creation of a UNO trusteeship (under one or more of the United Nations, or perhaps even under Italy), or the division of the country between France and Egypt (the latter was known to have designs on Cyrenaica). But when the Soviet delegation revealed Russia's desire to obtain the trusteeship for Libya, the ensuing uproar resulted in a decision to postpone a solution of the whole Italian question until a later meeting.

The United States delegation on Sept. 22 released its proposals for the disposal of the Italian colonies. For Libya it suggested that the colony "be granted independence at the end of ten years. In this interval it will be under a United Nations Organization trusteeship agreement. This will provide for an administrator with full executive power appointed by and responsible to the Trusteeship Council of the United Nations Organization. To him will be attached an advisory committee of seven, composed of representatives of the United Kingdom, the Union of Soviet Socialist Republics, France, Italy, and the United States and a European and an Arab resident of Libya selected by the five Governments named."

The members of the newly organized Arab League naturally felt that Libya was within their range of interest. Indeed, unofficial delegates from Tripolitania and Cyrenaica went to the Cairo Conference of the Arab States in February and March to present their case for independence (see PAN-ARAB AFFAIRS). The League's Secretary General, Abdul Rahman Azzam Bey, therefore demanded of the Conference at London that it grant complete independence to Libya after an interim period of trusteeship under an Arab state acting on behalf of the UNO.

Beginning on November 6 bloody anti-Semitic riots broke out in Tripoli and in several neighboring cities. In all more than 100 Jews were killed and several hundreds wounded, in addition to the Arab casualties, and much property was looted or destroyed. Over 700 persons were arrested by the British military authorities on various charges. The exact cause or causes of these outbreaks among a usually pacific population was a matter of considerable speculation. Pan Arab instigation from the outside was suspected. The local Arab leaders publicly deplored and disavowed the actions of the Moslem element. Economic motives may also have played some part, though a more poverty-stricken community than that of the Jews of Tripoli would be hard to imagine.

ROBERT GALE WOOLBERT.

LIECHTENSTEIN. A principality in central Europe, adjoining Switzerland on the east. Area, 65 square miles. Population (1941 census), 11,218. Capital, Vaduz (2,020 inhabitants). Chief products: corn, wine, fruit, wood, marble. Main industries: cotton spinning and weaving, leather goods, pottery, and

livestock raising. Liechtenstein belongs to the Swiss Customs Union; Swiss currency is used. Budget estimates (1944): revenue 2,530,490 francs; expenditure 2,435,749 francs. Public debt, Dec. 31, 1944, 2,732,503 francs (Swiss franc was worth about \$0.23 in 1944). Reigning Prince, Francis Joseph II (succeeded Aug. 25, 1938).

LITERATURE, American and British. The reviewer of creative writing published in 1945 could not help being impressed, at year's end, by an odd upsurge of vitality and hope. This was surprising, since the political outlook could be called only dismaying, and the time from war's end was so short. Yet the vitality and hope were there. They were shown not in bulk of work published, for scarcity of materials still ruled on both sides of the Atlantic, but in tone. In fiction, poetry, drama, readers of English were asked to adventure, to experiment, to take a chance with new subjects and new techniques and to learn to understand strange ways, strange cultures, strange beliefs. Writers collectively seemed to be gathering themselves for a new productivity and creativeness, despite the many threats to the future of culture, even of mankind itself, and despite the gloom and despair still abundant in their subject matter. What writers said was often without hope, but the energy and effect somehow belied them. 1945, seen over-all, could only be considered highly promising for the cultural future.

Biography. As in many earlier years, American autobiography stood out in the year's work for interest and variety. George Santayana continued his *Persons and Places* with volume ii, *The Middle Years*. Morris L. Ernst, in *The Best Is Yet*, showed the causes that engage a New York City lawyer. Varian Fry's *Surrender on Demand* told how he helped refugees out of Nazi Europe. George and Helen Papashvily wrote in dialect about an immigrant from the Caucasus in *Anything Can Happen*. J. Frank Dobie's *A Texan in England* admired England. Esther Cloudman Dunn's *Pursuit of Understanding* dealt with education. Marquis James, in *The Cherokee Strip*, and Harvey Fergusson, in *Home in the West*, described Western childhoods, while Louis Bromfield's *Pleasant Valley* and Betty MacDonald's *The Egg and I* dealt with life on farms. Richard Wright's *Black Boy* pictured a horrifying Negro childhood, while *Lay My Burden Down*, edited by B.A. Botkin, contained narratives of slavery by surviving slaves. Marshall Field's *Freedom Is More Than a Word* indicated why he became a publisher. John M. Mecklin's *My Quest for Freedom* was for academic freedom. Walter B. Cannon's *The Way of an Investigator* pictured the life of a medical researcher. Charles Hanson Towne's *So Far So Good* showed how a New York editor lives. Sophie Tucker's *Some of These Days* and George Antheil's *Bad Boy of Music* dealt with show business. Louise Reid Spencer's *Guerilla Wife* described hiding from the Japs in the Philippines. W.W. Blackford's *War Years with Jeb Stuart*, Civil War memoirs, had been long unpublished. Margaret Emerson Bailey's *Goodbye, Proud World* presented a rebel from Providence, R.I. Dane Chandos' *Village in the Sun* described a year in Mexico. Ray Stannard Baker published *American Chronicle* and Oliver La Farge *Raw Material*. A mock-autobiography was *Joe the Wounded Tennis Player* by Morton Thompson, and Karl Eske-lund's *My Chinese Wife* was also humorous.

J. G. Randall published the highly praised volumes i and ii of *Lincoln the President*, to the Gettysburg address. H.C.F. Bell's *Woodrow Wil-*

son and the People began with his Princeton days. Claude G. Bowers' *The Young Jefferson 1743-1789* provided a first volume for his series already published, while Helen Duprey Bullock's *My Head and My Heart* told of Jefferson's love for Maria Cosway. Arthur Styron's *The Last of the Cocked Hats* was about James Monroe and the Virginia dynasty. George W. Norris wrote the autobiography of a *Fighting Liberal*. Frank Graham described *Al Smith, American* and David Hinshaw *A Man from Kansas*, William Allen White.

Fawn M. Brodie's *No Man Knows My History* revealed Joseph Smith, the Mormon prophet. David B. Steinman's *The Builders of the Bridge* was about the Roeblings, father and son. Joseph Cannon Bailey described the work of *Seaman A. Knapp: Schoolmaster of American Agriculture*. M.M. Musselman's father, an inventor, was shown in *Wheels in His Head*. Henry Wise Miller, in *All Our Lives: Alice Duer Miller*, showed an interesting woman and a happy marriage. Dorothy Caruso's *Enrico Caruso* gave the great singer. Samuel Hopkins Adams explained A. Woolcott: *His Life and His Work Robinson Crusoe, U.S.N.*, by Blake Clark, was about George Tweed, who dodged Japs on Guam. Carlton Brown's *Brainstorm* described a manic-depressive. Here was variety indeed.

Much good writing about British literary figures appeared, such as *The Letters and Private Papers of William Makepeace Thackeray*, volumes i and ii, edited by Gordon N. Ray; *The Trollopes*, by Lucy Poate Stebbins and Richard Poate Stebbins; *A Fellow of Infinite Jest*, Laurence Sterne, by Thomas Yoseloff, *The Profane Virtues*, by Peter Quennell, about Boswell, Gibbon, Sterne, and Wilkes; *The Shelley Legend*, by Robert Metcalf Smith and others, showing falsification in his earlier biography; *The Lambs*, by Katherine Anthony, an unsuccessful attempt to apply Freud; *William Ernest Henley*, by Jerome Hamilton Buckley; *Tom Paine*, by W.E. Woodward; *John Henry Newman*, by John Moody; *The Life of Edmund Spenser*, by Alexander C. Judson; and three valuable autobiographies: Sean O'Casey's third volume, *Drums under the Window*, about the Easter rebellion in Dublin; Lord Dunsany's *The Strens Wake*; Cyril Connolly's *The Unquiet Grave*, a year in the life of a litterateur. Other British biography included the final volume of *Rufus Isaacs, First Marquess of Reading*, by his son, Gertrude Lawrence's *A Star Danced*; Ronald Chapman's *The Laurel and the Thorn*, deriding its subject, G. F. Watts, and Robert Gibbings' *Lovely is the Lee*, a charming book.

Asiatic autobiography appeared in force, as Santha Rama Rau's *Home to India*; Hilda Wernher's *My Indian Family*; Krishna Nehru's *With No Regrets*, for agitation against the British Raj; John J. Espey's *Minor Heresies*, a Chinese boyhood; *A Daughter of Han*, autobiography of a Chinese working woman, set down by Ida Pruitt.

Lives of Europeans included: *The Life of the Heart*, George Sand, by Frances Winwar; *Flores-tan*, Robert Schumann, by Robert Haven Schauffler; *Copernicus and His World*, by Hermann Kesten; *Marta of Moscow*, Catherine I, by Phil Stong; *The Red Prelude*, Zhelyabov, assassin of Alexander II, by David Footman; *Teresa*; or, *Her Demon Lover*, the Countess Guiccioli, by Austin K. Gray; and among autobiographies: Gertrude Stein's *Wars I Have Seen*; Joseph Wechsberg's *Looking for a Bluebird*; Alexander Granach's *There Goes an Actor*. Stuart Cloete described Africans, Kruger, Rhodes, Lobengula, in *Against These Three*. Dale Carnegie's *Biographical Roundup* dealt with critical chance moments in many lives.

Criticism and History of Literature. *An Essay on Rime*, by Karl Shapiro, drew attention, because of the author's rising reputation as a poet, because this volume was in poetry on poetry, because of the judgments made. Similar in intention was *Poet to Poet: Great Poems about Great Poets*, edited by Houston Peterson and William S. Lynch. What happened to Emily Dickinson's poems was explained at last in Millicent Todd Bingham's *Ancestor's Brocades*.

Volume v, but the first to appear, of the new *Oxford History of English Literature* was Douglas Bush's *English Literature in the Earlier Seventeenth Century 1600-1660*. An amusing history was William Gaunt's *The Aesthetic Adventure*, about the art-for-art's-sakers. Cyril Connolly discussed the 1930's in *The Condemned Playground*. Pedro Henriquez-Urena's *Literary Currents in Hispanic America* brought history up to the war.

Harry Slochower, in *No Voice Is Wholly Lost*, assessed writers and thinkers in war and peace. Frederick J. Hoffman ranged widely in *Freudianism and the Literary Mind*. Hardin Craig was genial in *Literary Study and the Scholarly Profession*. James T. Farrell was not genial, and very Marxian, in *The League of Frightened Philistines*, about both contemporary and past figures. Kenneth Burke's *A Grammar of Motives* discussed language as used in literature and politics.

Harold Clurman's *The Fervent Years* gave the history of the Group Theatre. Una Ellis-Fermoor explored *The Frontiers of Drama*, while Harley Granville-Barker explained *The Use of the Drama*. Fiction writers were considered in: *Virginia Woolf*, by Joan Bennett; *Tobias Smollett*, by George M. Kahrl, and *The Career of Victor Hugo*, by Elliott M. Grant. Charles Frederick Harrold's *John Henry Newman* was partly biography but even more criticism, on the centennial of Newman's conversion.

Drama. Tennessee Williams, the year's apparition in American drama, published *The Glass Menagerie*, which seemed very thin on the page, and *Battle of Angels*, which had lots of blood and fibre. John van Druten, whose talent seemed undimmed by war, published the pleasant *I Remember Mama*. Other Broadway successes included: Philip Yordan's *Anna Lucasta*, Norman Krasna's *Dear Ruth*; Paul Osborn's *A Bell for Adano*; John Patrick's *The Hasty Heart*; Louis Solomon and Harold Buchman's *Snafu*; Laszlo Bus-Fekete and M. H. Fay's *Embezzled Heaven*. From Britain came: *The Banbury Nose*, by Peter Ustinov, hailed as the white hope of British drama; *Tedious and Brief*, and *Plays for Plain People*, by James Bridie, who once had been a white hope himself; *Three Comedies*, by J. B. Priestley, and *Emma*, adapted from Jane Austen by Gordon Glennon.

But the year was notable for the "unplayable" plays, which used the form to say something demanding the form. Such were: W. A. Diggins's *Millenium I*, about a future war between man and machines; or *The Pet Shop*, by Gustav Eckstein, in which animals played nations, or vice versa; or *The Bridge*, by Stanley Burnshaw, a symbolical play about arriving at the future.

A couple of interesting patriotic radio plays were Norman Corwin's *On a Note of Triumph*, for V-E day, and Stephen Vincent Benét's *United We Stand*. Christopher La Farge's *Mesa Verde* was a verse libretto for an opera.

Essays. In 1945 essays were truly miscellaneous. Jacques Barzun, in *Teacher in America*, wrote brilliantly about college education. H. G. Wells' *Mind at the End of Its Tether* prophesied man's near extinction. Max Lerner's *Public Journal* was made

from articles on wartime America. *City Development*, by Lewis Mumford, dealt with society's whole structure. Aldous Huxley's *The Perennial Philosophy* quoted mystics and provided a commentary. Henry Miller's *The Air-Conditioned Nightmare* attacked America. Bucklin Moon edited *Primer for White Folks*, on race relations. Stephen Leacock's *Last Leaves* were partly humorous, partly serious. *Kitchen Fugue*, by Sheila Kaye-Smith, was about cooking in wartime and other items. F. Scott Fitzgerald's *The Crack-up* was edited by Edmund Wilson from papers he left. Earl Wilson's *I Am Gazing into My 8-Ball* was gossipy and vulgar, and *Artie Greengroin, Pfc.*, by Harry Brown, was soldier humor. Lore and legend about railroads could be found in *Railroad Avenue*, by Freeman H. Hubbard. Two impressive anthologies were: *The Practical Cogitator*, edited by Charles P. Curtis, Jr., and Ferris Greenslet, and *A Treasury of Satire*, edited by Edgar Johnson.

Fiction. Most interesting was a group of "different" stories, such as E. B. White's *Stuart Little*, about a mouse, or James Thurber's *The White Deer*, a grown-up's fairy tale; or Kenneth Patchen's surrealism in *The Memoirs of a Shy Pornographer*; Rumer Godden's remarkable exercise in technique *Take Three Tenses*; Frederic Prokosch's *Age of Thunder* "dissolved in myth"; Peter Bowman's *Beach Red*, written in poetic prose, a line to a second, a chapter to a minute, in an attacking soldier's life; Robert Reynolds' *The Obscure Enemy*, violence, also described in poetic prose; MacKinlay Kantor's *Glory for Me*, about a returned veteran, in verse; Robert Lawson's *Mr. Wilmer*, to whom animals spoke. Many of these could only be called failures, but they looked forward.

More conventional and successful were James Ramsey Ullman's *The White Tower*, a mountain climbed by an unusual party; *Jassy*, by Norah Lofts, a rural English girl's romance; *The World, the Flesh, and Father Smith*, by Bruce Marshall, about a good priest; Hugh MacLennan's *Two Solitudes*, French versus British in Canada; *The Folded Leaf*, by William Maxwell, the friendship of two boys; *Interim*, by R. C. Hutchinson, an odd English family.

Sinclair Lewis studied husbands and wives in *Cass Timberlane*. *Three O'Clock Dinner*, by Josephine Pinckney, showed family conflicts in Charleston, S.C. Christopher Isherwood's *Prater Violets* gave topical overtones to movie-making. Pearl S. Buck's *Portrait of a Marriage* showed an artist coddled by his wife Angela Thirkell published *The Headmistress* and *Miss Bunting*, to her admirers' delight. A sinister woman appeared in Rosamund Lehmann's *The Ballad and the Source*. Edna Ferber's *Great Son* showed a Seattle family. Utopias were described in Marguerite Young's *Angel in the Forest*. Upton Sinclair's sixth in the Lanny Budd series was *Dragon Harvest*. Josiah E. Greene won a prize and exposed human nature on a dairy farm in *Not in Our Stars*. Evelyn Waugh's *Brideshead Revisited* was amusing satire. James Street's *The Gauntlet* showed the troubles of a clergyman. *The Happy Time*, by Robert Fontaine, was a childhood in Ottawa, and Dan Wickenden gave a family in *The Wayfarers*.

Impressive first novels included: Walter Karig's *Lower Than Angels*, naturalism about a city youth; Adria Locke Langley's *A Lion Is in the Streets*, about an American fascist politician; *The House in Clewe Street*, by Mary Lavin, an Irish small town; René Kuhn's *34 Charlton*, a girl's search for independence; Arthur Miller's *Focus*, about anti-semitism—race relations were the subject of many

novels and stories this year, but none seemed better than *Focus*; Ruth Peabody Harnden's *Bright Star or Dark*, about Irish intellectuals; Mary Main's *Memory and Desire* showed an Argentine estancia.

Latin America, in fact, was a favorite setting. Alice Tisdale Hobart's *The Peacock Sheds His Tale* was laid in Mexico and about landholders. Josephine Niggli published *Mexican Village*. Betty de Sherbinin analyzed Argentine life in *By Bread Alone*. But E. M. Almedingen's *Dasha* was laid in Russia, and Robert Standish's *The Small General* in China.

The ever-popular historical fiction included: Thomas B. Costain's best-selling *The Black Rose*, travel and romance in the 13th century; C. S. Forester's *Commodore Hornblower*, about naval war in the Baltic against Napoleon; Marjorie Coryn's *The Marriage of Josephine*, to Napoleon; Herbert Gorman's *The Wine of San Lorenzo*, careful history of the Mexican War, Oliver St. John Gogarty's *Mr. Petunia*, Virginia one hundred years ago; John Brett Robey's *The Innovator*, Jerusalem at the Crucifixion.

Novels prompted by the war included: John P. Marquand's *Repent in Haste*, a tale of a flyer, Susan Glaspell's *Judd Rankin's Daughter*, on the home front; Glenway Wescott's *Apartment in Athens*, relations between conquerors and conquered; J. B. Priestley's *Three Men in New Suits*, effects on typical English people; Alex Comfort's *The Power House*, attacking today's politics; Gerald Kersh's *Faces in a Dusty Picture*, the North African campaign; Richard Brooks' *The Brick Foxhole*, non-combatant soldiers; Albert J. Guerard's *Maquisard*, the French resistance; Storm Jameson's *The Journal of Mary Hervey Russell*, about war and writers. Nicholas Monsarrat's *Leave Canceled* showed 24 hours in lives of an officer and his bride.

James Hilton's *So Well Remembered* pictured a good man. Letitia Preston Osborne's *They Change Their Skies* showed cosmopolitans in Honduras. Henry Morton Robinson's *The Perfect Round* had to do with a merry-go-round and was full of ideas. Frank Baker's *Mr. Allenby Loses the Way* was also a novel of ideas, disguised. Walter Van Tilburg Clark described a boyhood in Reno in *The City of Trembling Leaves*.

Among collections of short stories appeared: *The Collected Stories of Ben Hecht*; *Trial Balance*, the collected stories of William March; *Pipe Night*, by John O'Hara, about shabby people; *The Thurber Carnival*, by James Thurber. *The Short Stories of Henry James*, edited by Clifton Fadiman; *The Demon Lover and Other Stories*, by Elizabeth Bowen; *A Short Wait between Trains*, about army life, by Robert McLaughlin; *The Friendly Persuasion*, about a family of Quakers, by Jessamyn West; *The Forest of the South*, Southern stories, by Caroline Gordon; *Short Stories*, all about boys, by James Street; *The Facts of Life*, mostly difficult and obscure, by Paul Goodman.

History. A young new talent appeared in Arthur M. Schlesinger, Jr., whose *The Age of Jackson* won universal acclaim. Much other good work was published in American history, however. George F. Willison described the Pilgrim Fathers entertainingly in *Saints and Strangers*. Louis Adamic's *A Nation of Nations* showed the non-Anglo-Saxon immigrant's place in American history. Stephen Bonsal's *When the French Were Here* was about the end of the Revolutionary War. Lincoln, the inexhaustible, supplied material for William E. Baringer's *A House Dividing: Lincoln as President-elect*, and Jay Monaghan's *Diplomat in Carpet Slippers*, about his management of foreign affairs. Thomas A. Bailey published *Woodrow Wil-*

son and the Great Betrayal and Alan Cranston *The Killing of the Peace*, both about the League of Nations issue, but the first anti-Wilson though pro-League. James Truslow Adams edited *Album of American History*, volume ii, illustrations of the period 1783-1853. Morris Zucker's *The Philosophy of American History* was an ambitious attempt to make prediction and control of history possible.

Regional histories, so prominent in American historiography in recent years, abounded. In the *Rivers of America* series appeared Julia Davis' *The Shenandoah*; Stanley Vestal's *The Missouri*; Anne B. Fisher's *The Salinas*; in the *American Lakes* series Harlan Hatcher's *Lake Erie* and Arthur Pound's *Lake Ontario*. Meridel Le Sueur published *North Star Country* about the Dakotas, Wisconsin, Minnesota, and upper Michigan, while Maurine Whipple exuberantly insisted *This Is the Place: Utah*. Struthers Burt wrote about *Philadelphia: City of Brotherly Love*. Fred A. Shannon described the use and abuse of our land resources from 1860-1897 in *The Farmer's Last Frontier*. Henry Christman described a mid-19th-century anti-rent rebellion in New York State in *Tin Horns and Calico*. Alice Marriott's *The Ten Grandmothers* was about the Kiowa tribe of Indians. George R. Stewart's *Names on the Land* showed how American places got named. Sylvian G. Kendall's *American Soldiers in Siberia* described the 1918-1920 intervention.

In British history appeared: Arthur Bryant's *The Years of Victory 1802-1812*; J. A. Williamson's *Great Britain and the Empire*; Helen Merrill Lynd's *England in the Eighteen-Eighties: Toward a Social Basis for Freedom*, about the measures for social betterment initiated then.

Ellsworth Huntington showed the effects of solar cycles on history in *Mainsprings of Civilization*, while Gen. J. F. C. Fuller's *Armament and History* was a little closer to earth. Very close in time were *The Story of the Second World War*, edited by Henry Steele Commager, and *Unconditional Surrender*, by Everett Holles, about the European war from the high point of German conquest to the end. Carlton J. H. Hayes defended his *Wartime Mission in Spain 1942-1945*. J. M. Thompson published *Leaders of the French Revolution*. Donald Culross Peattie's *Immortal Village* was a history of Venice, in Provence, through the centuries.

Poetry. Robert Frost amused readers with *A Masque of Reason*, a debate between God, Job, Job's wife, about God's ways. *The Collected Poetry of W. H. Auden* was severely edited by the author, as was John Crowe Ransom's *Selected Poems*. Perhaps the final book of new poems by Emily Dickinson, *Bolts of Melody*, was edited by Mabel Loomis Todd and Millicent Todd Bingham. British poets of established reputation who published this year included Walter de la Mare with *The Burning Glass and Other Poems*, Louis MacNeice with *Springboard: Poems 1941-1944*, Edith Sitwell with *The Song of the Cold*, C. Day Lewis with *Short Is the Time*, and Edmund Blunden with *Shells by a Stream*. Jeremy Ingalls' *Tahl* had the mixed reception usually given epics. Marsden Hartley's *Selected Poems* joined poetry and painting through subject. William Ellery Leonard's sonnet sequence, *A Man against Time*, described the love affair of an old man, while Paul Engle's sequence, *American Child*, was about parenthood. Volumes covering several years' previous publication, usually with some new work, included: *The Selected Poems, 1912-1944, of Alfred Kreymborg*; E. J. Pratt's *Collected Poems*; Sylvia Lynd's *Collected Poems*; *Poems 1920-1945*, by David Morton, Ogden Nash's *Many Long Years Ago*. Allen

Tate's *The Winter Sea* and Randall Jarrell's *Little Friend, Little Friend* represented the more difficult American poets, while Robert P. Tristram Coffin's *Poems for a Son with Wings* and Oscar Williams' *That's All That Matters* represented the more easy. Alex Comfort's *The Song of Lazarus* had topical overtones. Norman Nicholson's *Five Rivers* was devotional. A curiosity was *A Stone, a Leaf, a Door*, passages from Thomas Wolfe's writings arranged in verse by John S. Barnes. Also noteworthy were: Jon Beck Shank's *Poems*; George Zabriskie's *Like the Root*; Caryll Houselander's *The Flowering Tree*; Ian Serrailler's *The Weaver Birds*; John Malcolm Brinnin's *No Arch, No Triumph*; Francis Meynell's *Seventeen Poems*; Robert Farren's *Rime, Gentlemen, Please*.

Among anthologies: *War and the Poet*, edited by Richard Eberhart and Selden Rodman, covering many centuries; *The War Poets*, edited by Oscar Williams; *Other Men's Flowers*, edited by Viscount Wavell; *What Cheer*, humorous, edited by David McCord.

BENFIELD PRESSEY.

LIVING COSTS AND STANDARDS. The average family found it more difficult to maintain customary living standards during the first few months of peace than at any time during the war. Incomes were reduced while living costs continued to rise and most goods remained as scarce as during wartime. Wage earners in industries producing durable goods—including munitions—suffered the greatest drop in weekly wages, more than fifteen percent between April, 1945, the last month of the two-front war, and September. Workers in non-durable goods industries and white collar workers in general had relatively little reduction in earnings but paychecks always had been smaller for these workers than for wage earners in heavy industries.

Most of the drop in incomes was the result of elimination of premium payment for overtime work, downgrading of jobs to accord with peacetime standards, and a transfer of workers from highly paid war industries to peacetime industries with lower pay scales.

Despite the high level of family incomes in the war years, a considerable number still received very small amounts, forcing them to draw on savings or go into debt to buy the basic essentials. A study, released by the Bureau of Labor Statistics late in 1945, indicated that even in 1944, when incomes were at an all-time peak, one-fifth of all city families and single persons had incomes of \$1,500 or less after taxes, and one-half had incomes of less than \$2,700. More than half of those families with incomes above \$3,000 achieved this level only because two or more persons in the family worked.

This study also indicated that the average family with an income of less than \$1,950 after taxes did not "break even" in 1944. Approximately one-fourth of all city families in 1944 had incomes below this amount. It should be emphasized that an income of \$1,950 after taxes left nothing for savings or life insurance payments, although the average family did buy war bonds, going into debt or drawing on savings to do so. The difficulty of achieving even this "break even" income is indicated by the fact that one person would have to work 50 weeks a year, 40 hours per week at \$1.03½ per hour to secure this income. Average hourly earnings in manufacturing in October, 1945 were \$0.99.

These incomes meant a fairly simple level of living for most families. The family which just broke even in 1944 earned \$2,070 before taxes,

paying \$119 in taxes to secure a net income of \$1,950. Typically such families spent an average of not more than 22 cents per meal per person. But even at this rate food took 38 percent of the family net income. Housing, including rent, light and refrigeration, took another 18 percent or \$359 (about \$30 per month). Expenditures for clothing took \$250, a somewhat higher percentage of total income than in prewar years, reflecting the sharp advance in clothing costs during the war years. Household operation and furnishings required \$140, and medical care \$105. The remaining income was spent on such things as transportation, personal care, recreation, and education.

Since living costs were slightly higher in 1945 than in 1944, the "break even" point in the latter year would be somewhat above \$1,950 after taxes, but no detailed figures are available.

Significant changes from prewar years in the pattern of spending were noticeable. Typically, food and clothing absorbed larger proportions of the total at any given income level in 1944 than in 1941, reflecting the substantial rise in prices for these goods. Because of effective rent controls, however, shelter costs did not equal these advances. The absence from the market of automobiles and durable household equipment was reflected in the much smaller amounts devoted to these goods in 1944 than in peacetime. Medical care took a larger portion of the total, particularly among low income families, with higher costs of medical care and possibly a greater need for care because of longer hours of work.

Even though the average family lived simply during the war years, it should be emphasized that many families were able to improve their level of living over prewar levels. Regular incomes and assurance of employment enabled many to occupy a home to themselves, to buy more and a wider variety of food, and to dress better than ever before. The improvement of living standards was especially marked for families in which the number of earners increased, where the chief earner found steady employment in place of unemployment, or was able to move from a low wage job to a higher. For such formerly low income families the war resulted in no more unfavorable economic consequences than moving to a different city or inability to find desired goods in stores, some of which they were financially able to buy for the first time.

The average wage earning family, while experiencing these common inconveniences, maintained its standard because of longer hours of work. This source of income made it possible for many families to pay taxes, buy war bonds and even to buy deteriorated goods or high-price lines without substantial inroads on their modest prewar standard of living. It is disappearing earlier, however, than these burdens on the family pocketbook. Those who suffered the most serious loss in living standards were those living on pensions or other forms of fixed income, and some of those families who lost a principal earner to the armed forces. Rationing and the unavailability of goods restricted the purchasers of the upper income third or so of the population. For the average family, however, only the durable goods were in short supply by prewar living standards. For example, the number of pairs of shoes allowed under rationing was greater than the normal prewar purchases of the moderate income family, although they were of inferior quality since the armed forces took all of the best leather. So, too, civilian per capita consumption of meat was greater in 1944 and 1945 (with rationing) than in the years of 1935-1939.

Of major importance, however, was the problem of maintaining quality, particularly for clothing and housefurnishings. The deterioration of quality—not measurable in official indexes—placed a serious burden on lower income families forced to increase their purchases of living essentials because of lessened durability of the merchandise they could buy. Equally important, and a major factor in the rise of living costs during 1944 and 1945, was the disappearance of the lower price lines of goods normally bought by working men's families. This forced "up-trading" was the principal cause of the rise of 18 percent in clothing costs between 1943 and 1945, and in the rise of 18 percent in costs of housefurnishings.

The end of hostilities in August brought relatively little change in the wartime living pattern of most families. Goods which had been scarce or unavailable continued scarce during the first months of peace. Housing was even shorter in December than in December 1944, low cost clothing of prewar quality was generally unobtainable, and coal was about as hard to get during late 1945 as during the previous winter. Supplies of food for civilians were generally larger, however, and petroleum fuels were in ample supply.

Retail prices of living essentials (as measured by the Consumers' Prices index of the Bureau of Labor Statistics) rose about 2 percent in 1945, approximately the same as in 1944, and less than in earlier years. Prices rose during the first seven months of the year to the highest levels since 1921, declined during the late summer with seasonally lower prices for fruits and vegetables, and rose again during the last quarter of the year. The gradual advance in prices was not materially affected by the end of the war.

Food prices at retail were only slightly higher in December 1945 than in December 1944. The housewife, however, no longer had to pay for goods with both money and ration coupons. Between August and December all foods were removed from ration lists except sugar, which was in poorer supply than during the war. Most other foods were generally available, although shoppers still had difficulty in finding bacon and hams, choice cuts of beef, and cooking fats and oils. Butter was generally obtainable although some stores continued informal rationing. Canned fruits occasionally were in short supply. Temporary shortages of other foods such as milk and eggs developed during the early winter but these usually were local and of short duration.

Clothing prices rose 5 per cent, the greatest increase for any of the major groups of living essentials. Most of the increases resulted from the continued disappearance of lower price lines, a problem which troubled government control agencies throughout the war. Significantly, such disappearance, which had been especially characteristic of women's and children's clothing, was most severe in men's clothing during 1945. Low priced cotton garments—shirts, shorts, pajamas—generally were unobtainable despite concerted efforts of governmental agencies to restore such goods to the market. Men's wool outer-clothing, which had been generally adequate during the war, virtually disappeared in many areas as needs of discharged servicemen were added to the already substantial civilian demand. Many, who for patriotic or other reasons had postponed purchases during the war, found it impossible to buy clothing which they needed, and the outlook was for supplies inadequate to the huge demand during much of 1946.

Women's and children's clothing continued in

short supply. Some garments of prewar quality at low prices, which were produced under government directive, reached retailers' shelves but the supply of these was far below demand and they were sold out almost as soon as they appeared.

Rents in large cities remained virtually unchanged in 1945, under tight government control, but the housing situation was more critical than at any time during the war and the real estate market was at inflationary levels. The removal of government restrictions on private building in October had little effect on new residential construction since materials remained scarce. The return of millions of discharged veterans, anxious to reestablish their homes, aggravated the condition in many areas. War production centers remained crowded, for laid off workers generally stayed in the areas rather than return to their old homes. In December, the President ordered the re-establishment of priorities on building materials to channel them into production of low and moderate priced homes, and asked the Congress for authority to control the price of houses, old and new. The Price Administrator indicated his intention to request authority to continue rent controls beyond the statutory limit of June 30, 1946, and governmental authorities estimated that the housing deficit would increase rather than decrease in 1946.

In accordance with their long term trend, rates for electricity and gas continued to decline fractionally during 1945, but prices for most other fuels advanced as in earlier war years. Retail coal prices rose to an all-time high as OPA allowed price increases in mid-year and again in December to cover higher production costs. Coal supplies remained tight through 1945 because strikes, production slowdowns and decreased labor supply reduced output; the coal made available by cutbacks in war production were generally not the kind preferred for domestic house heating and thus did little to relieve the situation. Petroleum fuels, on the other hand, were adequate by the end of the year. Gasoline was removed from rationing immediately after the cessation of hostilities and supplies were so plentiful that price wars occurred in some areas. Fuel oil was plentiful and those householders who had oil burning furnaces were in a more enviable position during the 1945-1946 winter than those who could use only coal. On the Eastern seaboard users of fuel oil and gasoline paid somewhat lower prices in December, 1945, than in December, 1944, following the removal of wartime price increases granted in 1942 to defray the higher cost of transporting petroleum fuels to the East by rail rather than tanker.

Prices of housefurnishings advanced 4 percent over the year, the largest increase for any groups except clothing. As in the case of clothing, most of the rise was caused by the disappearance of lower price lines. In housefurnishings this was especially important for sheets, curtains, and rugs. These goods still were available only in higher price ranges at the end of the year.

Durable consumer goods such as automobiles and household electrical equipment generally had not returned to the market by December. There were a few exceptions. Stoves, no longer rationed, were on the market in quantity, and electric heaters were available in most stores. Other equipment, however, such as refrigerators, washing machines, and vacuum cleaners, and smaller articles such as toasters, were in stores for display purposes only and few deliveries were being made to buyers. Automobiles were being produced at rates far below earlier estimates and only a few lucky pur-

chasers had actually received their cars. The cut-back in production of military equipment improved the supply of tires and allowed the ending of tire rationing at the end of the year.

Cost of miscellaneous goods and services advanced 1 percent during 1945. Costs of medical care continued to rise fractionally as the relatively small numbers of doctors and nurses released from military forces remained inadequate to restore prewar standards of service. Service industries such as laundries and dry cleaning establishments moved to restore prewar service with the end of governmental restrictions, but labor shortages in these low wage establishments continued to hamper service.

From the standpoint of the average consumer, 1945 differed little from immediately preceding years except in the promise which it held for a return of the peacetime way of life, and it appeared that many months would pass before this could be achieved.

GALEN B. PRICE.

LUTHERAN CHURCH, The. The Lutherans in America showed a steady growth in spite of wartime obstacles to parish work and mission activities. Membership totals for the United States and Canada were: baptized members 5,390,280, confirmed members 3,796,516; organized congregations 16,087, ordained ministers 13,953. Total receipts during 1944 were \$88,128,888, of which \$66,622,542 was for local expense and \$21,506,346 was for benevolences. A slight increase was recorded in the enrollment of Sunday and weekday schools, checking a downward trend begun in 1940.

Seventeen separate Lutheran bodies are included in the above total, some of them with their roots going back into the State churches of the mother countries in Europe. They have continued to experience a desire to work together in closer fellowship looking forward to the possibility of eventual unity. Eight of the bodies cooperating in the National Lutheran Council, comprising about two-thirds of the Lutherans of America, began a new chapter of cooperative activity under the Council's revised constitution, through which they have opened up larger channels of work in the fields of American missions, welfare, student work, and public relations. Work was continued in cooperation with the Missouri Synod to provide an adequate ministry for the men and women in the armed forces, furnishing abundant religious supplies to over 770 Lutheran chaplains throughout the world and maintaining 75 service centers in the United States, Canada, Alaska, the Hawaiian Islands, Europe, the Philippines, and China. This activity will continue during demobilization, with increased service to returning veterans. In addition, most of the 42 spiritual centers for war workers and their families in industrial areas were maintained at top capacity. An intensive program to provide a spiritual ministry to prisoners of war in this country was continued cooperatively by the National Lutheran Council and the Missouri Synod.

To finance the above activities and also to support the care of the Lutheran orphaned missions throughout the world and help rebuild the Lutheran Churches of Europe, the National Lutheran Council churches raised over \$2,200,000 on a budget of \$1,790,000. A goal of \$10,000,000 for the same purposes was set for the two years of 1946-47, the bulk of this fund to be used in Europe in behalf of the orphaned missions.

In the Synodical Conference, which makes up the remaining third of American Lutheranism, the

Missouri Synod alone collected over \$5,500,000 as a special Peace Thank Offering in 1945 to be used for reconstruction in devastated areas, an educational building program and home missions. The Lutheran Hour, a world-wide religious broadcast featuring Dr. Walter A. Maier, professor at Concordia Theological Seminary, St. Louis, reached a new high during 1945 in the number of broadcasting stations employed and nations served. Seven hundred and eighteen broadcasting stations under 23 different flags carried the Lutheran Hour resulting in mail from 59 different countries. One hundred and ninety-seven theological students entered the ministry of the Lutheran Church, Missouri Synod in 1945.

In March of 1945, a three-man Lutheran commission, representing the National Lutheran Council and the Missouri Synod, went overseas, visiting bishops of the Scandinavian countries and also the World Council of Churches headquarters in Geneva. Immediately upon the end of the war in Europe, Dr. S. C. Michelfelder was established in Geneva as a commissioner of the American Section of the Lutheran World Convention to supervise relief activities for American Lutherans and to coordinate them with similar activities carried on by the World Council of Churches. In November another joint five-man Lutheran commission, with special permission from President Truman, returned to the continent to investigate conditions in the Lutheran Church of Germany. National Lutheran Council delegates then called the first meeting of the Executive Committee of the Lutheran World Convention held in Copenhagen, Denmark, in December, 1945, the first to take place since May, 1939.

LUXEMBURG. A grand duchy in western Europe, under occupation by German armed forces from May 10, 1940, until liberated by Allied armed forces late in 1944. Area: 999 square miles. Population (Jan. 1, 1940, estimate): 301,000. Capital: Luxembourg. Agriculture was the occupation of 32 percent of the people. Oats and potatoes were the chief crops. Livestock (1939): 154,727 pigs, 107,417 cattle, 18,017 horses, 8,465 sheep, and 3,107 goats. The mining and metallurgical industries are the most important. In 1939 the output of pig-iron and ferro-alloys totaled 1,776,000 metric tons, steel ingots and castings 1,824,000 metric tons. In 1938 there were 35 blast furnaces and 7 steel works in operation. The budget for 1940 indicated revenue of 326,600,000 francs and expenditure of 369,000,000 francs. Public debt (Jan. 1, 1940): 1,528,000,000 francs.

Events, 1945. During the late winter of 1944-45 Luxembourg, after having had half its territory ravaged in the December offensive of the Wehrmacht, was liberated for the second time by American forces. On April 14 the Grand Duchess Charlotte returned to her country after five years of exile. She had established a Consultative Assembly in February. On October 21 the voters of the Duchy elected a new Chamber of Deputies. Of its 51 members, 25 represented the Christian-Socialist Party, 11 the Labor Party, 9 the Patriotic-Democratic Party and 5 the Communist Party, with one independent. The reconstituted cabinet was as follows:

Prime Minister—Pierre Dupong, Chr. Soc.
Minister of Foreign Affairs—Joseph Bech, Chr. Soc.
Minister of Labor—Pierre Krier, Labor
Minister of Education—Nicolas Margue, Chr. Soc.
Minister of Justice—Victor Bodson, Labor
Minister of Economic Affairs—Guill. Koesbruck, Chr. Soc.
Minister of the Interior—Eugene Schaus, Patr. Dem.
Minister of Social Welfare—Charles Marx, Comm.

Luxemborg participated in the San Francisco Conference and ratified the Charter August 10. The Government was preoccupied throughout the year with problems of reconstruction, relief, and repatriation of refugees.

FREDERICK L. SCHUMAN.

MACHINE BUILDING. The sudden termination of hostilities in both Germany and Japan found us almost as unprepared for peace as we had been for war. Munitions urgently needed to carry on the war became surplus over night and drastic readjustments had to be planned and executed as promptly as possible. While this was largely a managerial problem it also affected production by enabling it to plan for utilizing some of the methods developed for war work in peacetime production.

Among the machining methods which had been greatly improved as a result of war work are broaching, honing, and milling. Two striking examples of advanced broaching practice were found in the Rock Island arsenal and the Springfield Armory, both being manufacturing units of the Army Ordnance Department. These broaching operations included both the cutting of the rifling grooves in the rifle barrels and the manufacture of many parts used in the making of the new Garand, semi-automatic rifle. While guns of 155 mm bore had been rifled by broaching in some of the best gun plants in World War I, the grooving of the 30 and 50 caliber rifle barrels by the broaching method is believed to be new. Both of these plants broach their rifle barrels, but the method developed at Rock Island is unique and works well.

The Rock Island method uses a different type of broach and does not require a guiding cam to give the proper helix angle. It also grinds the teeth off of worn broaches and uses them in place of reamers to size the rifle barrel before broaching. Springfield has replaced the usual profile miller, so common in most gun shops, by broaching machines which are used on nearly every part that was formerly milled. This involved the designing and building of some very special fixtures for holding the work and is but one of the new methods which have been adapted by the arsenals.

Honing has also been used much more extensively than ever before. At the Rock Island Arsenal it has become standard practice for finishing both the cylinders and plungers for the recoil mechanism used on the various field guns. It has also been used extensively in making the hydraulic mechanisms or "oleos" of the landing gear of airplanes of different types. Its use has also increased in many peacetime operations, replacing the cylindrical grinder for many operations.

Higher speeds and feeds in milling practice are now found in many shops where machine equipment will permit. This is largely due to the extensive research that has been made as to possible speeds and feeds obtainable with the newer types of carbide cutting tools. This is true on both the harder steels and on the softer metals, such as aluminum and magnesium, which have come into use in the endeavor to reduce the weight of parts of airplane engines and other mechanisms. While much of this research has been done in the shops of makers of both milling machines and milling cutters, definite research programs were sponsored by the Office of Production Research and Development. These programs were in charge of a Mechanical Engineering Committee made up of members of the American Society of Mechanical Engineers. Careful studies were made at both the

California Institute of Technology and at the University of Michigan under the direction of this committee and Data Sheets giving the results of these tests were published and widely distributed to shops of various kinds where milling was part of their work on war products. The increased speeds and feeds resulting from the experience gained in this way had a direct influence on the quantity of work produced for the armed forces, which included many projects from airplanes to tanks.

The use of welded structures in the building of machinery is on the increase. While this is not new, as there are examples of broaching machine beds and even planers being welded previously, its use is growing and some of the late examples of frames for large hydraulic and other press units, are very striking. Increased use of welded bases has been retarded by the feeling on the part of many designers that a heavy mass of metal was necessary in most machine beds, to absorb vibrations due to operations being performed. It has required time for designers of welded bases to prove that, when the bases are properly designed there are no vibrations to be absorbed.

This trend toward welded structures has spurred the makers of both malleable iron and steel castings to improve their practice and to make new efforts to sell their products. The final decision will depend both on cost and also to some extent on the suitability of the welded metals for bearing surfaces. In the case of the planer previously mentioned it was necessary to attach cast-iron wearing surfaces to the welded structure. Some machine structures are built up by welding castings to the steel frame but it is usually better to attach the bearing surfaces by mechanical means and avoid the dangers of distortion.

Experience with the highly stressed parts of airplane engines, such as connecting rods, has led to the development of what is known as "shot peening" of the surface after machining. Fine pellets of steel are blown against the finished surface under considerable pressure, compressing the surface a few thousandths of an inch and adding to its resistance to fatigue stresses while in use. This peening replaces the high polish formerly considered necessary by some. In the Studebaker plant they follow the shot peening with a lacquer spray which protects the surface of the metal against the corrosive action of perspiration from the hands of workmen. This is an added protection, not only in the plant where the rods are made but also in the storage depots in various parts of the globe, and in the field. In the tropical countries this is even more important than in this country.

The large numbers of unskilled workers which it was necessary to utilize in the making of various war products naturally encouraged the designing of more automatic machinery than before and the combining of operations where possible. Both hydraulic and electrical controls for cutting tools by which they followed patterns or templates were used in making forging and other dies with semi-skilled workers. The most striking development of automatic control is the Man-Au-Trol developed by the Bullard Co. primarily for use on their vertical turret lathe. As at present used it can control 40 different settings of the tools without attention of the operator. It does not prevent the machine being used manually at a moment's notice and the same device is also being applied to the controls of other machine tools.

In addition to simplifying and speeding the operation of the machine it also prevents errors in setting the tools for any of the cuts needed. One application was the machining of the crankcase of a large radial engine where a single error would scrap the forging as well as all the work previously done. In the war effort this would mean great delay in addition to the cost. This is a phase of the automatic machine problem that is not always considered.

Utilizing experience gained on war work when it was necessary to drive machines to their limit, the builders of machine tools have, or soon will have, new types of machines as well as greatly improved construction in the older types. Some are offering to rebuild their own make of war-worn machines for use where obsolescence is not the main factor, as in contract and jobbing shops. It seems also quite probable that the success of having parts built in different shops may carry over into peace time products to a considerable extent.

New products such as surface plates of marble, granite and glass are likely to make a place for themselves. Glass gages, which were a war necessity, may be made commercially in spite of the controversy which their use aroused. It is also probable that some of the lower priced machine tools which did such good service during the war, may find a wider field than before. With lowered machining costs, due to new cutting tools and new methods, these machines may provide real competition to the better known machines.

FRED H. COLVIN.

MACY FOUNDATION. Established in 1930 by the late Mrs. Kate Macy Ladd in honor of her father, Josiah Macy, Jr., the Foundation reported total expenditures for the year ending Dec. 31, 1945, at \$406,746; total grants paid \$226,000. Drafts are not permitted upon the endowment, which has a ledger value of \$6,541,175. Emphasis is placed on special problems in medicine which require for their solution studies and efforts in correlated fields as well, such as biology and the social sciences. Approximately \$100,000 of expenditures for 1945 was used for the distribution of medical reprints to medical officers of our armed forces and our Allies. This war Reprint Service has been discontinued. President: Dr. Willard C. Rappleye. Medical Director and Executive Secretary: Dr. Frank Fremont-Smith. Headquarters: 565 Park Avenue, New York 21, N.Y.

MADAGASCAR. A large island, belonging to France, located off the southeastern coast of Africa. Including dependencies, it has an area of 241,094 square miles and a population (1936) of 3,797,936, of which 25,255 were French.

Government. The colony now comprises not only Madagascar but the formerly separate colonies of Diego-Suarez, the island of Nossi-Bé, the island of Ste. Marie, and the Comoro Islands. The latter are strategically located in the Mozambique Channel about halfway between Madagascar and the African mainland. The Governor-General is assisted by a Consultative Council of Administration and an Economic and Financial Delegation comprising a French section and a native section. Both the French and native sections consist almost entirely of elected delegates, who ordinarily meet once a year to discuss the budget and other economic and financial questions (see *Events* below). A large part of the lower civil and military offices are filled by natives.

Events, 1945. Early in the year the Governor-

General declared that Madagascar was prepared to send to France no less than 40,000 tons of coffee, 25,000 tons of rice and smaller amounts of other items sorely needed by the French consumer, if shipping could be obtained. Also early in the year, it was announced that reforms were to be enacted which would allow the natives greater participation in local administration.

In the spring a decree was signed which created a Representative Council. This measure constituted a long step forward, since the Economic and Financial Delegation could not concern itself with political problems and since in any case the Governor-General would overrule its recommendations. The new Council was to consist of sixty members: twenty elected by the French citizens in Madagascar, twenty natives elected by local bodies, and twenty appointed by the Governor-General (eight French and eight natives chosen to represent eight different economic centers, plus two French and two natives selected to represent the trade unions). These men were to serve a four-year term and were to be elected by a restricted franchise. The body was to be a deliberative one and its decisions were to be binding.

Population. A number of different peoples or tribes comprise the native population of Madagascar. The most intelligent and numerous are the Hova, who speak a language that is related to dialects of Malaya and Oceania, and which serves more or less as a *lingua franca* for much of the island. In addition to the various native peoples, there are communities of Indians, Chinese, and Arabs, many of whom are engaged in the retail trade.

Madagascar has for several decades been the object of intense Christian missionary activity, particularly by Protestants. There are now nearly 2,000 Catholic and about 3,500 Protestant churches, in addition to 75 mosques. Most of the Hova and the other tribes in the central districts have embraced Christianity, while the outlying tribes are still largely pagan. Education among the natives is also much further advanced than almost anywhere else in Africa. In 1939 there were 1,011 government schools with 126,947 pupils, and 706 private schools with 94,232 pupils. There are also higher institutions for advanced training in medicine, administration, agriculture, and the like.

Economy. Madagascar is one of the largest and most productive of the French colonial possessions. Soil and climatic conditions are favorable for the production of tropical and subtropical crops over wide areas. The principal crops, together with the area under cultivation in 1938, were: rice, 1,319,250 acres; manioc, 558,100 acres; maize, 216,162 acres; sweet potatoes, 296,400 acres; coffee, 230,080 acres; vanilla, 55,340 acres; and sugar cane, 43,401 acres. Forests are extensive and valuable. In 1936 there were 6,000,000 cattle in the colony. The beginnings of modern industry may be observed here and there. Graphite is the principal mineral product of the island, 14,400 tons being mined in 1938.

During the last prewar year (1938) Madagascar's imports were valued at 602,710,000 francs and her exports at 819,397,000 francs. France supplied three-fourths of the imports and took four-fifths of the exports. There is thus a considerable volume of shipping that calls at the island's ports, of which the most important is Tamatave. The total railway mileage exceeds 500 miles. Before the war Madagascar was connected with France by a weekly air service.

ROBERT GALE WOOLBERT.

MAGAZINES. Few sharp changes marked the re-conversion of the magazine industry from war to peacetime publishing. The product remained substantially unchanged, and to magazines which had been straining against paper restrictions and printing handicaps, the war's end did not mean unlimited output. Lack of skilled labor, and difficulties in the form of strikes, notably at the R. R. Donnelley Company's huge printing plant in Chicago, slowed production. In place of the Government's program of paper rationing, repealed in September, came natural rationing caused by continued shortages. While there was not sufficient paper to take care of all demands, enough was forthcoming to permit lifting subscription restrictions which were in effect during the war; and by the year's end, only a handful of magazines were refusing new subscriptions even for one-year periods.

Advertising. Advertising restrictions were being lifted, except in certain magazines like *Time* and *Newsweek*, so oversold that they still had a considerable backlog of unfilled space orders. The physical appearance of magazines gradually improved with better paper and larger page and type sizes being used at the close of the year.

Advertising revenue of magazines continued to gain in 1945, increased still further by the wide use of color advertisements. The total income from magazine advertising in 1945 exceeded \$300,000,000, showing an increase of some \$29,000,000 or almost 10 percent over 1944. An increase in advertising guarantees and rates was announced by a number of publications including *Saturday Evening Post*, *Time*, *Life*, *Fortune*, *Newsweek*, *Liberty* and others.

Circulations climbed to new highs, subject to production limitations.

Content. Editorially, there were the beginnings of perceptible changes to gear magazines to peacetime living. Magazines such as *Life*, which had devoted so much space to war features, were including more and more material of domestic, home-front appeal. In the last quarter of 1945 there was some "war fiction" published, but dozens of stories appeared dealing with the returned serviceman, his problems of readjustment, etc. In non-fiction more emphasis was placed on home building, health, general science, etc., and the transition from a life of war strain to fireside and neighborly pursuits.

Expansion and Investments. Financially, the magazine business had enjoyed spectacular success during the war years, and at the beginning of 1945 there were dozens of new magazines announced for publication, many of them getting under way even before all paper limitations were lifted. Publishers were planning to take advantage of the stepped-up reading habits of Americans—and new and more magazines in various fields were forthcoming. Also, elaborate plans were made for revitalizing established publications. Many large publishers spent a great deal of their pre-tax profits on research surveys to determine their markets and potential readers.

The successes in the field during the past few years have been apparent to more than those in the publishing fraternity. Perhaps for the first time the industry began to be looked upon as "big business" with large profits likely for the investor. Equitable Securities of Nashville, Tennessee, purchased in 1945 two influential southern magazines—*Holland's* and *Farm and Ranch*. This investment banking corporation paid \$450,000 for these two, giving it ownership of three publications, *The Southern Agriculturist* having been previously purchased.

Liberty was purchased by the Atlas Corporation, a Manhattan investment firm, for some \$2,000,000. This company also owns such profitable publications as *Silver Screen*, *Movie Show* and *Screenland*.

Marshall Field extended his publishing interests to the magazine field. In addition to his book and newspaper holdings, he purchased the *Southern Farmer*, a monthly with a circulation of some 300,000, through the firm, Cross Country Reports, of which he is part owner (with James P. Warburg). For editor and publisher of this new publishing acquisition, Mr. Field engaged Aubrey Williams, former National Youth Administration Director.

Beyond this, Marshall Field formed the Magazine Corporation of America, of which Norman Cousins, editor of the *Saturday Review of Literature* is editorial director, and J. R. Cominsky, vice-president of the *Saturday Review* is business manager. This group is engaged in research and planning for a new national mass-circulation weekly.

To insure an adequate paper supply for themselves, several publishers purchased paper mills. Time, Inc. bought the Bryant Paper Company and Maine Seaboard Paper Company. Curtis Publishing Company purchased the Book Mills of the New York and Pennsylvania Paper Company.

New Publications. There was hardly a field that was not covered by at least one new magazine, either announced or published during 1945. Many general magazines came upon the scene, and new trade periodicals were put out to meet the demand of those businesses which flourished during the war.

The phenomenal success of magazines appealing to teen-agers, notably *Seventeen*, which reached an estimated circulation of 800,000 in December, prompted other publishers to tap this lucrative field. Throughout the past year lineage reports show *Seventeen* in the top bracket of the listing for women's magazines. Beginning in November, another publication made a bid for the profitable junior market—*Junior Bazaar*. This is issued by the publishers of *Harper's Bazaar* and aims at being a "young New Yorker." A monthly selling for 35 cents, it competes with *Glamour*, *Charm*, *Mademoiselle*, and, to some extent, *Miss America*. Also bidding for this market is the *American Girl*, which revamped its format, added color pages and shortened its articles, making an appeal for the 13 to 17 group.

Aimed at the women's market are two new magazines, *Fascination*, published by the Avon Pocket-size Book Company, which began in December, issuing its January, 1946, issue. Also, the publishers of *Family Circle* brought out in October the sample issue of a new monthly women's service magazine, *Eve*. This will be distributed through the chain stores and will sell for five cents.

A field that is attracting several new publications is the veterans' market. While some old magazines such as *Pic* and *Argosy* are revamping their magazines and aiming at the returning GI group, there have also been a number of new ventures, with several others scheduled for 1946. *Amvets*, started by the American Veterans of World War II, has brought out a 16-page monthly tabloid.

Another is *Veteran Outlook*, from the Public Affairs Press. It aims to be a "clearing house of economic, social and legislative information for ex-servicemen." *Army and Navy Bulletin* is a new magazine for reservists and other non-regular officers.

Other magazines scheduled in this field are *Veterans News*, *Veteran Journal*, *Convoy America*,

New York Veterans Report, dealing with the problems of the ex-serviceman.

An ambitious publishing venture came in the form of *Ebony*, a life-size and style picture magazine for Negroes, with John H. Johnson, editor of *Negro Digest*, acting as editor.

But these are only a few of the host of publications that saw light for the first time in 1945. In April, AM, a daily trade news magazine, came out with a "rehearsal" issue. Scholastic Magazines brought out *Scholastic Debater* for high school and speech students. A new publication dealing with the problems of the girl in business, *Business Girl*, was launched. *Picture-Wise*, a picture story magazine, appeared. The publishers of *Magazine World*, trade journal for the magazine trade, announced a new publication designed to improve house organs—*Edit*. Others making their appearance were *Radio Maintenance*; *Railway Equipment*; *Gentlemen*; *Industrial Plastics*; *Sports Management*; *Housing Progress*; *Village Chatter*, covering topics of interest in Greenwich Village; *Folklore Quarterly*; *Mind Digest*; *Containers*; *Best Stories*; *Super Market Merchandising*; *Your Home*; *Power House*; *Mystery Book*; *Labor-Management Digest*; *South American Digest*, which is written in English and deals with South American life and peoples; *American Products*; *Televue*; *Two to Six*, brought out by the publisher of *Baby Talk*, covering editorially this small child group.

Published in Canada but distributed both in Canada and in this country is a non-profit magazine designed to promote international understanding—*This Month*. Both original and reprint material are included from U.S. and foreign publications.

Labor and Nation made its appearance. It deals with national and international life as they concern labor; public opinion as it bears on labor; reviews of labor literature.

To report latest developments to the industry, air travelers, air schools, sporting and aeronautical societies, *American Helicopter* appeared in December.

Out in November was *Commentary: A Jewish Review*, sponsored by the American Jewish Committee, which "aims to meet the need for a journal of significant thought and opinion on Jewish affairs." *Commentary* incorporates the *Contemporary Jewish Record*, issued by the Committee for the past eight years.

Foreign Editions. With the cessation of hostilities, magazines looked towards the potential foreign markets, serviced during the war and after by government-issued books and magazines. *Newsweek's* French edition became full-sized, becoming the first American periodical to publish a continental civilian magazine. *Omnibook* followed it closely with a special new edition in English for distribution all over Europe, and an Australian edition of *Omnibook* is announced for early in 1946. Time, Inc. set up a new company called Time-Life International to control the activities of *Time*, *Life* and *Fortune* outside the U.S. and Canada. The new division of *Time* is to convert the armed service editions from exclusive military readership to commercial readership all over the world. English editions of *Time* are printed in Sweden, Argentina, Brazil and Hawaii. These are the same editorially as in the U.S., being flown to 22 other countries. In keeping with the bid for the foreign market, in June, 1945, the *Reader's Digest* added another foreign language edition to its list, this in Finnish. This makes five foreign language editions of the *Digest*, the other four being in Spanish, Portuguese, Arabic and Swedish. The

combined circulation of these foreign language editions is over a million and a half.

As an outgrowth of the prosperity which the magazine industry enjoyed, many publications have expanded beyond the strict limits of magazine publishing. *Young America* set up a separate educational film company, producing 16 mm films, specifically designed for supplementary teaching tools. Publisher David A. Smart of *Esquire* and *Coronet* plans to make instructional sound color films for classroom use. Crowell-Collier formed its Editorial Extension to supplement the editorial policy of Crowell-Collier Magazines (*Collier's*, *Woman's Home Companion*, *The American*), through pamphlets, movies, etc., which will aim at local community action on problems of public interest.

During the past year, *Esquire*, *Look*, *Mademoiselle*, *Vogue*, experimented with television, and it is possible that magazines will be a source of material for future programs.

Another instance of this expansion is seen in the new line of 25-cent reprints called Bantam Books, the first of which were out late in 1945. One of the large owners of this new book company, which is a direct competitor of the highly successful Pocket Books, is the Curtis Publishing Company.

Revivals. With the war's end many suspended publications were resumed, or will soon resume publication. *International Digest*, which started as a quarterly in June, 1944, and was published irregularly from then until last fall, is now a monthly, with the first print order of a quarter of a million. Beyond the resumption of the publication of *International Digest* in this country, French and Spanish editions are in preparation, and a Scandinavian edition is due shortly.

Everybody's Digest, begun as a quarterly, becomes a monthly with the February, 1946, issue.

But many of the suspended magazines will probably never be revived. Fawcett Publications, sixth largest paper users in the country, dropped from 63 to 14 publications during the war. Rather than resume all these, they will probably concentrate on the current leaders. They have already changed *Life Story Magazine* to *Today's Woman*, beginning September, 1945. *Today's Woman* is now designed to fit the requirements of the young woman between the ages of 18 and 30. Another Fawcett publication, *True*, gradually became a "slick with a strictly masculine approach." Fawcett has also been concentrating on the promotion of their comic group, having added a number of monthly, bi-monthly and quarterly comics. And Fawcett's *True Confessions Magazine* made a sales record, becoming in the summer the largest-selling magazine on American newsstands. During the first six months an average of 1,959,405 copies of each issue were sold on the newsstands. *Startling Detective Magazine*, suspended in August, 1944, was resumed with the January, 1946, issue.

Yankee, which had been published intermittently during the past few years, resumed publication. Other resurrections were *Dare Devil Aces*, *Sport Novels*, *True Aviation*—and *Print* resumed in January.

Suspensions. There were also some suspensions. Many of these had purely wartime interest. Among them were *Yank*, *Flying Cadet*, *Tricolor*, *South Today*, *Aerend*, *American Prefaces*, *Fantasy*, *Woman's World*, *Air Pilot and Technician* and *Battle Birds*.

Government Rulings. The long-continued case of the Postmaster of the United States vs. *Esquire*, regarding the right of *Esquire* to a second-class

mailing privilege, entered a new phase in June 1945. The U. S. Court of Appeals reversed the lower court's findings that Postmaster General Frank C. Walker "had rightly deprived the publication of its second-class mailing privileges." Associate Justice Thurman Arnold left no doubt that he saw no basis for Walker's stand. This victory for *Esquire* was hailed as an affirmation of the freedom of the press. The case was reviewed by the U. S. Supreme Court, which upheld the decision of the U. S. Court of Appeals.

With the cut in the appropriation for the OWI, periodical activities by the government were somewhat curtailed. But a number of magazines met the demand from our Allies for information about the United States. Two such were started in France—*Voir*, a picture magazine with a circulation of some 520,000, and *Choix*, a digest monthly produced jointly by the U. S. and Britain. *Voir* was suspended in August, as all of these magazines were designed merely to fill the gap until French publishing activities are resumed. There are counterparts of them in other European countries. *America* and *America Illustrated* for Russia; *Kijk* for Holland-Belgium, and two new ones for distribution in Germany: *Heute*, a monthly picture magazine, and *Auswahl*, a digest publication.

Forecast. At the year's end there were a large number of new magazines in the offing, many of which, dated January, 1946, made their appearance late in 1945. Among these was *Picture-News*, which aims to enliven current events with comic-book appearance and format. It covers books and movies, science, and entertainment.

Four new juvenile magazines were announced for early 1946 by Parents Institute: *Polly Pigtales*, *Sport Stars*, *Calling All Boys*, and *Calling All Kids*. They will contain articles, stories, movie reviews, some comics and rotogravure sections, and they aim to be of better quality than the run-of-the-mill juveniles. Parents Institute is also resuming publication of *True Aviation*, *Picture Stories*, *Real Heroes*, *Funny Book*. All of these, plus *Calling All Girls* and *True Comics*, will be known as the Parents' Junior Quality Group.

Further elaborate announcements and advertising campaigns have been carried on for some large-scale ventures. One of the most noteworthy is *Science Illustrated*, bought by the McGraw-Hill Book Company and being entirely revamped so that only the name remains. It will be a monthly, selling for three dollars a year. An initial print order of 500,000 is planned, with a circulation guarantee for the first issue of 250,000.

Another announcement of importance was that of Curtis Publishing Company's new magazine, *Holiday*, to make its first appearance with March, 1946, out in February. Counting on a postwar travel boom, Curtis has been working on this magazine for some time. It is designed for the "man, woman and child who wants to go places and know what he'll find when he gets there." This 50-cent monthly will concentrate on the vacation and holiday market.

Aside from these large enterprises, there are a number of smaller ventures scheduled. Among these is *The Californian*, a national fashion consumer magazine also covering travel, screen and fiction. *Salute*, produced by former editors of *Yank* and *Stars and Stripes*, will be on the stands with a February issue.

Horizons, a new cultural and recreation magazine for the Midwest, will be launched in Chicago.

Early in the new year Fawcett planned *Best Detective Cases*, a slick rather than a pulp.

In April, *Travel and Camera*, published by U. S. Camera Publishing Corporation, will bow in, replacing *U. S. Camera Quarterly*, which was suspended during the war.

United States News Publishing Corporation will initiate some time during the first half of 1946 a new weekly newsmagazine, *World Report*. This is to be profusely illustrated, "devoted entirely to the reporting and explanation of the news and background of international affairs."

Competing with the *American News Trade Journal*, the publishers of *Magazine World* are bringing out *Newsdealer*, aimed at the dealers who distribute independently of the American News Company.

The first issue of *Farm Quarterly*, handsomely illustrated, for those who want to farm for profit, progressive farmers, county agents, and agricultural students, was to appear on March 1. It is published by the publishers of *Automotive Digest*, *Mintcam Photography*, *Writer's Digest*, *American Savings Journal*, and will sell for 50 cents. It will be sold both on subscription and on the newsstands within a 750-mile radius of Cincinnati.

Farrell Publishing Company will bring out a companion magazine to *The Woman* to be called *Woman's Digest*.

A new quarterly, *Baby Post*, is distributed free to customers of stores of the Associated Merchandise Corporation. It is edited by the editors of *My Baby*.

The Atom; *Bestsellers*, a monthly containing condensations of three or four books in each issue; *CQ*, a radio amateur's journal; *Smart*; *The Design for Living*; *College and University Business*; *Cosmetic and Drug Preview*; *Public Works News*, are among the dozens of periodicals in prospect.

In the experimental stage, Curtis Publishing Company has a picture magazine due late in 1947, rumors persist, with few details available, of a new opinion magazine of the quality type to be launched by Time, Inc.; and there are vague reports of experiments with *Magazine X* by Look Magazine, and a new venture by Crowell-Collier.

There has been some speculation among publishers as to the effect of this onslaught of new publications on newsstand sales, where there will be dozens of bidders, old and new, for the magazine reader's money. Some feel that the impetus given magazine reading during the war years is likely to continue the boom. On the other hand, findings of the American News Company survey in November, 1945, showed a slump, particularly in the sale of comics and pulps. In the areas most affected by the industrial strikes, the sales were poorest. The closing of various Army and Navy bases in the south Atlantic and west south central regions also caused a decline in sales in those regions. The only exception was in weeklies and class magazines, which actually increased in some of those sections.

A. S. BURACK.

MAGNESIUM. Production of primary magnesium in the United States, which had shot to 183,584 short tons in 1943, and declined to 157,100 in 1944, subsided to 33,500 in 1945, less than any year since 1941.

A frantic plant construction program early in the war left the industry with annual production capacity of 293,000 short tons, never fully utilized. Of this capacity, 263,000 was owned by the government, representing an investment of \$369,-446,164.

Of the 12 companies who owned, or managed

for the government, 16 plants during the peak of wartime demand, only Dow Chemical Co. was in commercial production at the end of 1945. Dow owns outright 18,000 short tons of annual production capacity at Midland, Mich., and Freeport, Tex. It holds a purchase option on adjoining government-owned facilities at Freeport with a 9,000 tons annual capacity and another government owned plant at Velasco, Tex., with 36,000 tons annual capacity. During the war the process of extracting magnesium raw materials from sea water was perfected to such an extent that Dow will concentrate its postwar production at the Freeport plant, on the Gulf of Mexico, built in 1940.

Permanente Metals Corp., owned by the Henry J. Kaiser interests, at the end of the year was engaged in experiments aimed at reducing production costs at its Los Altos, Calif., plant, located about 75 miles south of San Francisco. The plant, which uses the carbothermic reduction method, has a rated capacity of 12,000 tons a year.

Built to produce magnesium in a hurry, with the least possible use of critical materials, the government owned plants showed widely varying production costs. Lowest costs achieved by each of the various plants, exclusive of interest and depreciation, ranged, at those using the electrolytic process, from 11.51 cents per lb. at Velasco, Tex., to 57.26 cents per lb. at Lake Charles, La. Plants using the ferrosilicon process showed minimum costs of from 18.32 cents per lb. at Luckey, Ohio, to 55.05 cents per lb. at Dearborn, Mich. Magnesium metal sells for 20.5 cents per lb.

Aircraft and incendiary bomb manufacture used the bulk of magnesium produced during the war, with relatively smaller amounts for tracer and incendiary ammunition, alloying with aluminum, and export. Estimates of annual postwar consumption quoted by the Surplus Property Administration range from 25,750 short tons to 32,250 short tons, with the aircraft industry still the principal consumer. Other civilian uses of the metal, whose principal selling points are its light weight and ease of machining, are seen in passenger automobiles, trucks and busses, portable tools, reciprocating parts of machinery, furniture, and other uses where weight is a factor.

The Surplus Property Administration recommended on December 7 that six of the government plants be retained for magnesium production during periods of national emergency. Providing, with the privately owned plants, a national annual capacity of 127,000 tons, these plants are located at Freeport and Velasco, Tex.; Spokane, Wash.; Canaan, Conn.; and Painesville and Luckey, Ohio. The remaining seven government owned plants, the SPA urged, should be sold or leased for other industrial purposes. It appeared that several of these would be acquired by the electro-chemical industry, which, like magnesium production, depends on sources of cheap power.

World magnesium production capacity was estimated at the end of 1944 to total from 394,200 to 419,200 short tons annually: United States, 293,000; Germany, 35,000-55,000; United Kingdom, 30,000; Japan, 15,000-16,500; Russia, 5,500; Italy, 5,000-5,500; Canada, 5,400; France, 3,300; and other countries, 2,000-5,000.

CHARLES T. POST.

MANCHUKUO. A former empire in northeastern Asia, established under Japanese protection Mar. 1, 1932; occupied by Allied armed forces following the surrender of Japan in 1945. It comprised the Chinese provinces of Fengtien, Kirin, and Heilung-

kiang in Manchuria, and Jehol and the six northern counties of Chahar in Inner Mongolia. Capital, Hsinking.

Area and Population. Including the South Manchuria Railway Zone under direct Japanese jurisdiction but excluding Kwantung (q.v.), the area of Manchukuo is estimated by Japanese sources at 503,013 square miles. The population at the census of October, 1940, was 43,234,000 (23,920,000 males, 19,314,000 females). As of Jan. 1, 1940, there were estimated to be 37,581,833 Chinese and Mongols (Mongols numbered about 1,000,000), 1,162,127 Koreans, 642,356 Japanese, and 67,710 of other nationalities. Estimated populations of the chief towns in 1939 were: Mukden, 834,703; Harbin, 473,422; Hsinking, 395,855; Antung, 214,972; Kirin, 135,000; Newchwang, 168,931.

Production, Trade, etc. See preceding YEAR BOOKS for statistics to 1940.

Government. Under the Constitution of Mar. 1, 1934, as amended July 1, 1937, Manchukuo was a monarchy in which the Emperor exercised both executive and legislative powers, the latter being subject to the approval of the Legislative Council, an advisory body appointed by the Emperor. There was a Privy Council, a State Council, and a General Affairs Board. (See under *Events*.)

Events, 1945. The Chinese territory of Manchuria together with the territories of Inner- and Outer-Mongolia, which lie directly west of Manchuria, constitutes an empire comparable in climate, agricultural and mineral resources to the section of the United States stretching from the Great Lakes westward through the Dakotas to Montana and southward to Nebraska.

It is the only section of Chinese territory where large scale farming and stock raising is possible.

Together these territories have a total area of 2,378,013 square miles or about nine times as much as Texas. Aside from Russian Siberia and Korea, Manchuria is nearer to the United States than any other section of Continental Asia.

Manchuria has long been known as the "cockpit of Asia" due to the complicated politics of the territory and the number of international conflicts which have been fought on Manchurian territory.

Racially the native inhabitants of Manchuria, the Manchus, are closely akin to the Mongols. Both the Mongols and the Manchus have conquered China, the Mongols in the 13th century and the Manchus in the 17th century. However, both conquerors were absorbed into the more highly cultured and fecund Chinese population. Also, being nomadic, neither the Manchus nor the Mongols were able to withstand the tides of Chinese immigrant farmers and merchants which swept into their countries from the densely populated areas to the south. Chinese migration into Manchuria and Inner-Mongolia, prior to the Japanese invasion, exceeded a million a year. Most of the Chinese came from the densely populated provinces of Shantung, Hopei and Honan. Of Manchuria's 35,000,000 odd population, the overwhelming majority are of Chinese blood.

International Conflict. China's first treaty with a foreign state, Russia, was signed at the Siberian town of Nerchinsk, a short distance west of the Manchurian border, in the 17th century. The treaty constituted China's first official recognition of Imperial Russia's expansion into the Far East. The treaty marked the beginning of recorded relations between China and Russia which have generally, but not always, been peaceful. In the Chinese Ming Dynasty (1368 to 1643 A.D.) Manchuria em-

braced the northern part of Korea, the present Russian Maritime Province and other territories of Siberia east of Lake Baikal, including Sakhalin Island. In three treaties signed with Russia in 1689, 1727 and 1858, usually following armed conflicts, China lost most of her Siberian territories north of the Amur and east of Lake Baikal to Imperial Russia. In 1860, by the Treaty of Peking, China recognized the Amur-Ussuri Rivers as the border between Manchuria and Russian Siberia. In these territorial readjustments China surrendered to Czarist Russia a land area practically as large as present Manchuria.

High Point of Czarist Expansion. The high point of Czarist expansion into this section of Northeastern Asia was in the years between 1896 and 1903, which embraced the period of the so-called "Boxer Rebellion" in North China when all of the Powers sent troops into the Peking area. Russia took advantage of the situation to improve her strategic position by the construction of railways and ports which provided access to the waters of the Pacific, thus making Russia an Asiatic-Pacific Power as well as a European Power. In 1896 Russia obtained from China a concession to build a railway across north Manchuria connecting the Lake Baikal district with Vladivostok. The railway was known as the Chinese Eastern Railway. In 1897 China granted to the Czar a lease on the Liaotung Peninsula of South Manchuria and the right to build a naval base at Port Arthur at the tip of the Peninsula on the warm waters of the Yellow Sea. In 1898 China granted Russia the right to build a railway directly across Manchuria from north to south, connecting the Russian Siberian lines with Port Arthur.

Between 1900 and 1903 Russia sent large forces into southern and eastern Manchuria ostensibly to protect her railway rights and port concessions, but her expansionist activities in Manchuria precipitated war with Japan which resulted in Russia's defeat. Russia was forced in the resulting peace treaty which was signed at Portsmouth, N. H., in September, 1905, to surrender to Japan Port Arthur and adjacent territorial and dock interests and the railway which the Russians had built from Harbin in North Manchuria to the tip of the Liaotung Peninsula, as well as the so-called Kwantung Leased Area and the then undeveloped port of Dairen. In the Treaty of Portsmouth (N. H.) Russia declared she had no territorial designs in Manchuria which were prejudicial to the sovereignty of China.

Russia Renounced All Rights. In 1917, following the Bolshevik Revolution, Soviet Russia renounced all czarist "rights" in Manchuria and on July 25, 1919, declared that all mining, forestry and other concessions secured by the czarist regime by force would be returned to China and that all treaties would be revised "on a basis of equality," including renunciation of Russian extraterritorial rights. The only Russian property over which the Soviet Union maintained control was the Chinese Eastern Railway crossing north Manchuria, which the Soviets ultimately were forced to sell to the Japanese at a sacrifice, following the Japanese intervention in Manchuria in September, 1931. China protested against the sale on the grounds that the line crossed Chinese territories and China legally owned a half interest in the property.

Japan Expands into Manchuria. Japan's acquisition of Russian properties in South Manchuria in 1905 was followed by a period of intense imperialist expansion in Manchuria. The Russian railway was converted to standard gage and equipped in accordance with American railway standards. Dairen

was developed into a modern port and the territory between Dairen and Mukden and including northern Korea was developed into a modern industrial base second only to that of Japan proper. Within this area were the Fushun Colliery, largest open-cut coal mine in the world, the large Anshan Iron and Steel Works and numerous industrial plants including textile mills, chemical plants and various munition plants and war industries.

Puppet State of Manchukuo. In 1932 the Japanese Kwantung Army defied the world and, despite protests by the United States and Great Britain and other countries, set up the puppet state of Manchukuo, placing on the throne the Manchu "Emperor" Henry Pu-Yi, popularly known as the "Boy Emperor" who had been deposed by the Chinese Republicans at Peking in 1912. His new title was "Emperor Kangteh" of Manchukuo. Soviet paratroopers, dropped at the Manchukuo capital Hsinking on Aug. 22, captured and interned Emperor Kangteh "in a safe place."

The high point of Japanese aggression in Manchuria was reached in September, 1931, when Japanese Armies belonging to the so-called Kwantung or Manchurian branch of the Imperial Forces, seized Mukden, the capital of Manchuria. The seizure took place at night without prior notice.

China Depended on Geneva. While Chinese forces put up some resistance, particularly in North Manchuria, China referred the case to the League of Nations at Geneva which, after prolonged debate, supported China's position. More than fifty nations represented there condemned Japan and ordered the territory restored to China. Japan refused to recognize the League's action and proceeded to occupy and fortify all of Manchuria, including most of Inner, or Southern Mongolia. Strategic railways were built chiefly leading to points on the Russian Siberian and Mongolian borders. The railways of northern Korea were connected with those of Eastern Manchuria, almost encircling the Soviet Far Eastern port of Vladivostok. Indications pointed toward a further Japanese invasion of Siberia and Outer Mongolia, but after two armed clashes, one near Vladivostok and the other on the Mongolian front, the Japanese apparently decided to forego their aggressive designs on Russia and shortly afterward entered into a Non-Aggression Pact with the Soviet Union in which Russia recognized Japan's position in Manchuria and Japan recognized Russia's position in Outer Mongolia.

Japan's invasion in 1931 which involved the scrapping of all post World War I treaties, including the arms limitation and other agreements of the Washington Conference, actually marked the beginning of World War II, for Japan's action was shortly followed by Mussolini's invasion of Abyssinia and Hitler's violation of Austria, Poland, and Czechoslovakia.

Russia Returns to the Far East. The latest chapter in the checkered history of Manchuria dates from Russia's entrance into the War in the Pacific. The Soviet declaration of war against Japan (dated, Moscow, Aug. 8, 1945) was as follows:

1. After the defeat and capitulation of Hitlerite Germany Japan was the only power continuing the war.
2. The demand of the three powers—United States, Britain and China—of July 26 for the unconditional surrender of the Japanese forces was declined by Japan. Thus the proposal of the Japanese Government to the Soviet Union concerning mediation in the Far East loses its significance.
3. In view of the Japanese refusal to surrender,

the Allies approached the Soviet Government with a proposal to join the war against the Japanese aggressors and thus shorten the time for ending the war, reduce the number of victims, and aid in the general restoration of peace.

4. True to its duty as an ally, the Soviet Government accepted the proposal of the Allies and joined the declaration of the Allied Powers.
5. The Soviet Government believes that such a policy is the only means that can bring closer the ending of the war, liberate people from further sacrifices and sufferings, and give the Japanese a chance to avoid the danger and destruction which Germany lived through after its refusal to accept unconditional surrender.
6. In view of the above the Soviet Government declares that beginning tomorrow, that is August 9, 1945, the Soviet Union considers itself in a state of war with Japan.

The Soviet Far Eastern Army began hostilities against Japan at 12:10 A.M. Thursday (Aug. 9), launching a sudden attack along the Siberian-Manchurian border just an hour after Moscow's declaration of war became effective.

Russians Attack at Seven Points. According to a report on August 14, less than a week following Russia's declaration of war, the Soviet forces invaded Japanese occupied territory in Manchuria at seven points: (1) the western end of the Chinese-Eastern Railway; (2) from Outer Mongolia; (3) west of Vladivostok; (4) north of Vladivostok in the vicinity of Hulin; (5) in the vicinity of Khabarovsk near the mouth of the Sungari River; (6) southern end of Sakhalin; (7) in the Kurile Islands. In north Manchuria the Soviet objective, aside from seizing the Chinese-Eastern Railway was the capture of the old Russian metropolis of Harbin. On the eastern Manchurian front the objective was the terrain to the west of Vladivostok, the purpose being to occupy the Japanese railway lines and fortified points to the west of the Russian port. Later the Russians invaded northern Korea. The Soviet commanders on the various fronts included Marshal Alexander M. Vasilevsky, western and Mongolian front, directed at Harbin; eastern front, westward of Vladivostok, Marshal Kirill A. Meretskoff; valleys of the Sungari and Ussuri Rivers, Gen. Maxim Purkayeff; west bank of the Ussuri, Marshal Meretskoff; western Manchuria, Marshal Rodion Y. Malinovsky, Commander of the Transbaikalian Army, partly made up of horsemen. In addition to the land attacks it was reported that the Soviet Far Eastern Fleet, based at Vladivostok had attacked the Japanese ports of Yuki and Rashin on the upper northeastern coast of Korea, opposite Vladivostok, using Marines. The Russian Fleet was commanded by Admiral Ivan Yumasheff. The troops landed on the Kurile Islands were air-borne.

According to reports from Washington and London the Soviet Union had from 1,000,000 to 1,500,000 troops available in the Far East, a considerable portion being based in Outer-Mongolia.

It was thought that the Russian-Mongolian Army in Outer-Mongolia was ready to drive in a southeasterly direction through Kalgan directly on Peking.

Russia Long Prepared. An article in the New York Times by C. L. Sulzberger, dated at Geneva on Aug. 9, stated that Soviet preparations for invading Manchuria had been proceeding quietly for several months. Mr. Sulzberger, who had been in Moscow for several months, said that military missions from Outer Mongolia had been holding conferences in Moscow. Also that trips of the American Ambassador, Brig. Gen. Patrick J. Hurley,

between Chungking and Moscow had been concerned with diplomatic phases of the expected Russian war declaration against Japan and possible repercussions in China resulting from the Soviet action.

According to Lt. Gen. Albert C. Wedemeyer, Commander of American forces in China, Japanese withdrawal of troops from central and south China was partly due to Japan's anxiety about a possible Russian invasion of Manchuria and north China.

The Moscow radio reported on August 10 that the Republic of Outer Mongolia had declared war on Japan and was prepared to send ten Red Army-trained tank, infantry, and cavalry divisions into the struggle in western Manchuria.

Russians Used Mongolian Bases. A Moscow report on Aug. 15 claimed that a "two-pronged drive," presumably from Outer Mongolia, had carried the Russian Army to within 125 miles of China's ancient capital, Peking. The authority for the report was General Alexei Antonov, Chief of the Red Army General Staff. He said that this particular Russian drive was spearheaded by planes and tanks and was slashing across southern Chahar province of Inner-Mongolia, already reaching a point only twenty-five miles from Kalgan on the old Caravan Route running from Peking to Mongolia and Sinkiang. It was thought by some that this Russian drive into Inner Mongolia had some connection with the later advance into the region by Chinese Communist troops which later occupied Kalgan.

On Aug. 18 the southern wing of Marshal Rodion Y. Malinovsky's Transbaikalian Army occupied Chifeng, capital of Jehol Province directly north of Peking and only 150 miles from the sea. This represented a 120 mile drive directly eastward from the Outer Mongolian border.

Mukden stated, Aug. 16, that all Japanese troops in Manchuria had ceased fighting, but that the Russian forces were continuing their advance on all fronts despite Emperor Hirohito's capitulation proclamation. The Russian general staff regarded Hirohito's capitulation as "merely a general declaration of unconditional surrender," and until the Japanese issued an order to the Army to surrender its arms "Russia cannot consider it a complete capitulation."

The Russian Commander-in-Chief, Marshal Alexander M. Vasilevsky, on Aug. 18, sent an order to the Japanese Chief Commander in Manchuria, Gen. Otozo Yamada, to dispatch his Chief-of-Staff, General Hata to Harbin immediately so that he could board a Soviet plane to be transported to Khabarovsk, the Soviet Military Headquarters, to discuss the surrender terms. Marshal Vasilevsky stated that orders had been issued to the Soviet armies to cease military operations.

Japanese Had Million Men. Moscow estimated the Japanese Kwantung Army in Manchuria and other Japanese forces in Korea and Sakhalin Island to number 1,000,000 men.

Reports from Moscow, and Soviet Army Headquarters in Harbin, Changchun (Hsinking) and Mukden, Aug. 20, indicated the Russians had almost entirely occupied Japan's stolen Manchurian Empire of 503,013 square miles and 39,000,000 population.

An Allied war prison camp at the town of Sian, 100 miles north of Mukden, was liberated by the Russians, Aug. 24. The camp contained 1,698 prisoners, including twenty-eight American and other Allied officers. Among them were Lt. Gen. Jonathan M. Wainwright, Maj. Gen. George M. Parker of the U. S. Army, and Lt. Gen. A. E. Percival, Commander of British forces in Malaya.

By Aug. 27 the Russians had taken 438,000 Japanese prisoners; two days later the bag had been increased to 586,000 officers and men, and the Japanese were surrendering at the rate of 25,650 a day. The surrendered included 111 Generals, with booty of 687 aircraft, 347 tanks, 957 guns of various caliber, 711 mortars, 3,355 machine guns, more than 200,000 rifles, 108 radio stations, 1,789 trucks, 118 tractors and other vehicles, 9,708 horses, 727 ammunition dumps and large quantities of food. Among the generals was Otozo Yamada, Commander-in-Chief of the Japanese forces and twelve members of his staff.

Russians Occupy Port Arthur. The Russians announced they had occupied the great Czarist military and naval base of Port Arthur and had ordered all Japanese to leave the port which Russia lost to Japan in 1905. Over the Port Arthur radio they declared they were engaged in a "systematic cleansing of Port Arthur's Japanese scum"; and they proclaimed their intention of developing Port Arthur into "one of the mightiest naval bases in the Pacific."

Will Fortify Kuriles. Russian sky-borne troops which occupied the Kurile Islands took off from Kamchatka peninsula. The first landing was made on Shimushu Island close to the Japanese naval base at Paramushiro. Paramushiro was the frequent target of American Aleutian-based planes, only 750 miles away. The U.S.S.R. planned to develop new harbors on the Kamchatka peninsula opposite Alaska converting the 20 odd islands of the former Japanese Kurile group "into a veritable bastion forming a screen of steel for protecting Russian Pacific waters," and maintaining permanent garrisons on the Kuriles "in order to assure Russia free access to the Pacific."

"We Waited Forty Years"—Stalin. In an address commemorating the Russian victory—East and West—Stalin declared that Russia had a special account to settle with Japan. Japanese aggression against Russia went back to 1904, when the Japanese "took advantage of the weakness of the Czarist Government and treacherously attacked our country without warning." Russia suffered defeat. Japan seized Sakhalin and strengthened her hold on the Kuriles "thus locking all outlets to the ocean. It was plain Japan set herself the aim of wresting from Russia her entire Far East. In 1918, after the establishment of the Soviet system, Japan took advantage of the hostile attitude of Britain, France and the United States toward the Soviet Union and again attacked our country and for four years ravaged our people." Stalin then referred to the Japanese attacks on Siberian outposts in 1938—at Lake Khasan (near Vladivostok) and at Khalkhingol on the Mongolian border—which were beaten off. "For forty years we have waited for this day," he declared. "Our Soviet people did not spare their strength or labor for the sake of victory . . . I congratulate you, my dear compatriots, on the successful termination of the war and the coming of peace—glory to our Far Eastern troops and the Pacific Fleet."

Authorized at Yalta. Secretary of State James F. Byrnes stated on Sept. 4 that Russian occupation of the south half of Sakhalin and the Kuriles, and the old Czarist interest in Manchuria, had been authorized at the conference of the Big Three—Roosevelt, Churchill and Stalin—at Yalta in the Crimea. He said he did not think the United States would raise any objection.

The New York *Herald-Tribune* called attention to the fact that during the war with Japan the Kurile Islands "took on a malign significance for

Americans as they provided a stepping-stone to the Aleutians."

American Supplies Helped Russia. Russian participation in the war against Japan was greatly facilitated by American supplies sent to Siberia by plane from Alaska and across the Pacific from Portland to Vladivostok. The United States began turning over Liberty ships to Russia at the rate of 20 a month in the summer of 1944. They flew the Russian flag and carried war materials from Portland and other West Coast ports to Vladivostok. Each ship was valued at \$1,500,000. Value of materials shipped to Siberia amounted to \$1,700,000,000, of which \$900,000,000 represented airplanes, tanks, jeeps, ammunition and other war materials as well as large quantities of railway and construction materials.

Chinese-Russian Treaty of Alliance. Dr. T. V. Soong, Chinese Premier and Foreign Minister went to Moscow immediately following the San Francisco Conference, for the purpose of reaching an understanding with Russia concerning the relations of the two countries in Manchuria and Mongolia and various other issues. The fact that Dr. Soong held frequent conferences with the American Ambassador in Moscow indicated American interest in the subjects under discussion. According to Washington, early in August, the following subjects were on the agenda: (1) Formation of a coalition government in China to give adequate representation to the Chinese Communists. (2) Recognition of Outer Mongolia by China as an independent state, and recognition of Russian special interest in the area. (3) Passage over and possible return to Russia of the Chinese Eastern and South Manchuria railroads. (4) The right to reestablish a naval base at Port Arthur, the least concession being provision for ample dock facilities for commerce routed to the ice-free port. (5) Soviet concurrence in the Cairo Declaration assuring the independence of Korea. (6) China's agreement to Japan's return to Soviet Russia of the lower half of Sakhalin Island. (7) China's support for annexation by Russia of the Japanese Kurile Islands, or at least a sufficient number to give adequate guaranty of protection to Vladivostok and the mainland. (8) Discussion of Russia's and China's position with respect to the future status of Indo-China. (9) A guarantee by Russia of a "hands-off" policy toward Manchuria, with assurance of having a friendly neighbor. (10) Russian non-interference in the internal affairs of China and promise of fullest cooperation for the industrial, commercial, agricultural and cultural development of postwar China.

Treaty Published August 14. The text of the Russian-Chinese Treaty of Friendship was made public in Moscow on Aug. 14, the day the Japanese accepted the surrender terms of the Potsdam Ultimatum. The essential parts of the treaty consisted of five agreements concerning the disposition of the Chinese-Eastern, South Manchurian and other Manchurian railways, the naval base at Port Arthur, the adjacent port of Dairen, Manchuria as a whole, and the status of the former Chinese territory of Mongolia. The five supplementary agreements were as follows:

1. The former Japanese-owned South Manchurian Railway and the former Russia-Chinese owned Chinese Eastern Railway are to be amalgamated into the Chinese Chang-Chun Railway System under joint Chinese-Russian ownership and control as a purely commercial enterprise for a period of thirty years, following which they are to revert to China. The Chinese Government is to have charge of the railway police and of the main-

tenance of normal order and the guarding of railway premises and properties. The railways are to be subject to Chinese taxes. The Manchuria railways may not be used to transport Soviet troops, "except in a period of war against Japan." The Soviet Government has the right to transport on the railway "by transit without customs administration, military equipment in sealed carriages, which will be guarded by Chinese railway police but not escorted by Russian troops."

China will set up a Chinese Chang-Chun Railway Company and an administration of five Chinese and five Russians will be constituted. The chairman will be a Chinese member, the deputy chairman a Russian. In decisions concerning administration the chairman's vote counts as two. The administration will appoint a managing director and deputy director, the former Russian, the latter Chinese. Lower officials, including station masters, are to be equally divided among Russian and Chinese.

2. Port Arthur, the former Russian base at the tip of the Laotung Peninsula, which was taken over by Japan, is to become a joint Chinese-Russian base for a period of thirty years.

3. The Japanese port of Dairen, chief commercial port of Manchuria which was developed by the Japanese, is to be a free port with a Russian harbor master. All goods in transit to and from Russia are to be exempt from customs duties at Dairen.

4. With these exceptions Russia is to respect China's full sovereignty throughout Manchuria and agrees to withdraw all troops from that territory within three months after Japan's formal surrender. (The date of withdrawal agreed upon was February 1, 1946, according to a Moscow report.)

5. China recognizes the independence of Outer Mongolia, subject to a plebiscite. Russia agrees to respect the independence of Outer Mongolia. (A later announcement from Moscow stated the Mongols had voted "unanimously" in favor of independence.) The Russians also agreed to avoid interference in the internal affairs of Sinkiang, or Chinese Turkestan.

The life of the Chinese-Russian Alliance is to be thirty years and Russia is to render moral and military assistance to the National Government of China. The treaty was signed by Molotov on behalf of Russia and by Dr. Wang Shih-Chih, Foreign Minister, on behalf of the Chinese National Government. The treaties were ratified by both governments on August 24.

Of particular significance was the clause in the treaty in which Russia states its willingness to render China moral support and military assistance and other material resources, "this support and assistance to be given fully to the National Government as the Central Government of China." This declaration aroused widespread interest since there had been rumors the Soviet Government would support the Chinese Communist regime at Yenan.

The new treaty quickly received a severe test in Manchuria where Communist troops succeeded—with Japanese assistance—in gaining control of certain regions prior to the arrival of the Chinese Nationalist Army. (See reference to General Marshall and Kuomintang-Communist Controversy in the China section.)

Soviet Comeback. Belief was general that Russian invasion of Manchuria and the new 30-year treaty marked the return of Russia to the Far East, with renewed force and vigor far exceeding that which carried the forces of the Czar into these fertile regions a half century ago. That Japan realized the

significance of the Russian come-back was evidenced by Japan's seizure of Manchuria in 1931 as a supreme Japanese effort to forestall the Russian move.

It was thought that China's action in granting the Russians a naval base at Port Arthur would prevent China from pressing Great Britain to relinquish her base at Hong Kong.

JOHN B. POWELL.

MANDATED TERRITORIES. Following is a list of territories conquered from the German and Turkish empires during World War I and mandated by the League of Nations to various of the Allied Powers under the terms of the Treaty of Versailles.

<i>Mandated Territory</i>	<i>Mandatory Power</i>	<i>Former Owner</i>
Cameroons, British . . .	Great Britain	Germany
Cameroon, French . . .	France	Germany
Japanese Pacific Islands	Japan	Germany
Nauru	British Empire	Germany
New Guinea, Territory of	Australia	Germany
Palestine	Great Britain	Turkey
Ruanda-Urundi	Belgium	Germany
Samoa, Western	New Zealand	Germany
South-West Africa . . .	Union of South Africa	Germany
Tanganyika Territory . .	Great Britain	Germany
Togo, French	France	Germany
Togoland	Great Britain	Germany

Iraq, a territory mandated to Great Britain, became an independent state by treaty with the mandatory power on June 30, 1930. Iraq was admitted to membership in the League of Nations and the mandate terminated on Oct. 4, 1932. Syria and Lebanon were proclaimed independent republics on Sept. 16 and Nov. 26, 1941, respectively, by Gen. Georges Catroux, the Free French High Commissioner. On Dec. 27, 1943, an agreement was signed between representatives of the French National Committee of Liberation and of Syria and Lebanon, by which all powers and capacities exercised hitherto by France under mandate were transformed as from Jan. 1, 1944, to the Syrian and Lebanese governments. As a result of the defeat of Japan in World War II, the Japanese Pacific Islands passed to the control of the Allied Powers.

MARCUS. A small island in the Pacific (24° N. and 153° 30' E.), 1,185 miles southeast of Tokyo; occupied by the Japanese in 1899; under Allied control following the surrender of Japan in 1945.

MARITIME COMMISSION, U.S. The U.S. Maritime Commission, established by the Merchant Marine Act of 1936, is charged with the creation, development, and maintenance of an American Merchant Marine, adequate to serve as an auxiliary to the armed services in times of emergency; to carry all the nation's domestic water-borne commerce, and a substantial portion of its foreign trade.

A long range program to construct ships for replacement of obsolescent and over-age vessels was initiated in 1937-38, envisioning the building of 500 ships within ten years. At the same time a comprehensive system of training seamen was established, and other measures taken to insure the regulation and satisfactory operation of the American Merchant Marine under guidance of the Act of 1936.

An upward revision of building schedules was made in 1939 when an increasing burden was thrown on the United States merchant fleet by the outbreak and spread of war in Europe. Extension of aid to the nations aligned against the Axis in

1940 and the greater commitments planned under lend-lease led to the planning of an emergency ship construction program, put into operation in the spring of 1941. The first Liberty ships—the emergency-built vessels that came from the yards in so prolific a number in 1942 and 1943—were delivered the same month that Pearl Harbor was attacked.

A directive to the Commission from the President early in 1942 set the amount of shipping to be built that year at eight million deadweight tons and double that amount in 1943. The enormous productivity of the shipyards in the emergency program raised the amount of tonnage constructed under Commission direction in 1942 to more than the goal that had been set. As the emergency program made further advances in 1943, the year's total reached more than 19 million tons. In the first two years of wartime ship construction in the United States there were built 2,642 vessels. Their aggregate carrying capacity of 27,328,358 deadweight tons replaced all the shipping losses suffered by the United Nations.

At the beginning of 1944 the Commission announced that the emergency program would be curtailed during the year and that construction of faster cargo vessels and of special types for use of the armed services would be given emphasis. Production in 1944 was 1786 ships aggregating 16,299,985 deadweight tons. Though this was about one-sixth less than the record made in 1943, it includes a number of large vessels built for or converted to military use, showing comparatively little deadweight tonnage. In light displacement (the amount of water a ship displaces when unloaded), the tonnage built in 1944 exceeds the 1943 figure.

During the first 11 months of 1945, 1,060 ships of 10,383,000 deadweight tons were delivered. This period saw the completion of the Liberty and Victory ship programs as well as of the T2 type tankers.

War Shipping Administration. The WSA was created by an Executive Order of the President in February, 1942. It was given strategic control, for duration of the war, over all ocean-going vessels belonging to the United States except those under jurisdiction of the armed services. The training functions of the Maritime Commission were transferred to WSA. The U.S. Maritime Service for the training of seamen and their upgrading, and the Merchant Marine Cadet Corps for the training of young men directly as ships' officers were expanded to proportions by which the demands for ships' personnel have continuously been met. The Recruitment and Manning Organization supplements the efforts of owners, operators, and maritime unions in manning ships by seeking out experienced seamen ashore and inducing them to return to sea, and by taking whatever measures are necessary to prevent sailing delays for lack of crews.

Ships under control of WSA moved three-quarters of the 62 million long tons of export cargo from the United States in 1943. This rate of movement was about 20 per cent greater in 1944.

In the first six months of 1945, 48,225,000 long tons of cargo were exported on WSA controlled vessels. Of this, 11,850,000 tons were bulk liquid cargo, the rest military and dry cargo. On November 1, there were 4,442 merchant ships of 46,839,000 deadweight tons under WSA control.

In conjunction with the British Ministry of War Transport, the War Shipping Administration controls, from a strategic standpoint, the pool formed by coalition of all the shipping services of the United Nations.

United Maritime Authority: The United Maritime Authority was established in November 1944 to coordinate efforts of the United Nations in meeting shipping problems from the time of the defeat of Germany until six months after the cessation of hostilities with Japan. Participating members are the United States, United Kingdom, Netherlands, Norway and France. Associate members include Belgium, Canada, Greece, Poland, Australia, Brazil, Chile, Denmark, India, New Zealand, Sweden, and the Union of South Africa.

Meeting in October, the UMA decided to maintain control over commercial ship operation until six months after September 2, date set for suspension of hostilities. Delegates also agreed upon several steps to be taken in the interim period to simplify the operation of UMA control.

EMORY S. LAND.

MARKLE FOUNDATION, John and Mary R. Established in 1927 by John Markle. Limits its major activities to grants to institutions in support of special proj-

ects in medical research. Appropriations made in 1944 amounted to \$520,084, while grants paid and operating expenditures were \$505,974. There were in progress during the year 135 separate projects receiving aid. The year-end market value of the principal account was \$17,226,085. President, Thomas W. Lamont; Vice-President, George Whitney; Treasurer, Vernon Munroe; Secretary, Florence E. Quick; Assistant Treasurer and Assistant Secretary, Irene R. Power. Offices: 14 Wall Street, New York 5, N. Y.

MARRIAGE STATISTICS. The Census Bureau says it was due to "better economic conditions and . . . wartime psychology"—but, whatever the cause, 1942 was the marryingest year in the history of the United States: 1,758,000 marriages, being 13.1 out of every 1,000 of the population. The previous year was only a little below that figure with a rate of 12.6, and the following years scaled down to a 10.9 rate in 1944; in 1945 the trend was again up, reaching 1,600,000. That meant a five-year surplus

MARRIAGE LAWS REQUIREMENTS *

(As of January 1, 1946)

State	Minimum Marriage Age Specified in Law		Common Law Marriage Are Valid	Marriage Prohibitions, Infectious Diseases	Physical Examination and Blood Test for Male and Female		Waiting Period Before Issuance of License
	Male	Female			Date of Enactment	(a) Scope of Laboratory Test	
Ala.	17	14	Yes	None	(b)	15 da.	(g)
Ariz.	18	16	No	None	.	.	.
Ark.	18	16	No	None	.	.	.
Calif.	18	16	No	None	1939	30 da.	(c)
Colo.	18	18	Yes	None	1939	30 da.	(e)
Conn.	16	16	No	None	1935	40 da.	(c)
Del.	18	16	No	Yes ¹	.	.	.
Fla.	18	16	Yes	None	.	.	.
Ga.	17	14	Yes	None	.	.	5 da.
Idaho	14 ^d	12 ^d	Yes	None	1943	30 da.	(c)
Ill.	18	16	No	None	1939	15 da.	(g)
Ind.	18	16	Yes	None	1939	30 da.	(c)
Iowa	16	14	Yes	None	1941	20 da.	(c)
Kan.	18	16	Yes	None	.	.	.
Ky.	16	14	No	None	1940	15 da.	(c)
La.	18	16	No	None	(i)	.	.
Maine	16	16	Yes	Yes	1941	(c)	5 da.
Md.	18	16	No	None	.	.	2 da.
Mass.	18	18	No	None	1943	30 da.	(c)
Mich.	18	16	Yes	None	1939	30 da.	(g)
Minn.	18	16	No	None	.	.	5 da.
Miss.	14 ^d	12 ^d	Yes	None	.	.	5 da.
Mo.	15	15	No	None	1943	15 da.	(c)
Mont.	18	16	Yes	None	.	.	.
Neb.	18	16	No	Yes	.	.	.
Nev.	18	16	No	None	.	.	.
N.H.	14	13	No	None	1937	30 da.	(c)
N.J.	14 ^d	12 ^d	No	None	1938	30 da.	(c)
N.M.	18	16	No	None	.	.	.
N.Y.	16	14	No	None	1938 ^f	30 da.	(c)
N.C.	16	16	No	None	1941	30 da.	(c)
N.D.	18	15	No	None	1939	30 da.	(c)
Ohio	18	16	Yes	None	1941	30 da.	(c)
Okla.	18	15	Yes	Yes	.	.	.
Ore.	18	15	No	None	1937	10 da.	(h)
Penn.	16	16	Yes	None	1939	30 da.	(c)
R.I.	18	16	Yes	None	1938	40 da.	(c)
S.C.	18	14	Yes	None	.	.	.
S.D.	18	15	Yes	None	1939	20 da.	(c)
Tenn.	16	16	Yes	None	1939	30 da.	(g)
Texas	16	14	Yes	None	(j)	.	.
Utah	16	14	No	Yes	1941	.	(e)
Vt.	18	16	No	Yes	1941	30 da.	.
Va.	18	16	No	None	1940	30 da.	(c)
Wash.	14 ^d	12 ^d	No	Yes	.	.	3 da.
W.Va.	18	16	No	None	1939	30 da.	(c)
Wis.	18	15	No	None	1939	15 da.	(c)
Wyo.	16	16	Yes	None	1943	30 da.	(g)

* Time allowed between date of examination and issuance of license.

^b In 1919 law adopted applying to male only; laboratory test authorized but not required

^c Syphilis

^d Common-law marriage age

^e Syphilis and other venereal diseases.

^f Amended in 1939.

^g Venereal diseases

^h Syphilis and gonorrhea

ⁱ In 1924 law adopted applying to male only; laboratory test authorized but not required.

^j In 1929 law adopted applying to male only; no provision as to laboratory test.

^k "Yes" indicates that the state prohibits the marriage of those with a transmissible disease in an infectious stage.

* Information furnished by the Women's Bureau, U.S. Department of Labor.

above normal peacetime weddings of nearly a million and a half.

This repeats, only more intensely, the experience during World War I, when the number rose sharply from 1915 to 1917, then declined as men were shipped overseas; but this time the rate has stayed above normal instead of falling below as in 1918.

The permanency of most wartime marriages, whose prime attributes were speed and emotional impulse, faces serious jeopardy. By the beginning of 1946 more than half of the war-wed servicemen had returned to civilian life and one out of every four of these 800,000 men were almost immediately entangled in divorce proceedings. In the Feb. 3, 1946, issue of *The New York Times Magazine*, Jere Daniel stresses six basic reasons that form the groundwork for these divorces and separations; the haste with which ill-acquainted couples wed; separations forced upon them by the war; disillusion which accompanied return; economic ills which beset them during reconversion; adultery, another handmaiden of war; and the foreign mesalliances contracted by soldiers overseas. The present plight of war marriages gives rise to the prediction that two out of three war marriages will end in separation or divorce by 1950.

During 1945, 10.8 per cent more marriage licenses were issued in cities of 100,000 inhabitants or more than during 1944, according to the Bureau of the Census statistics.

During the seven years for which this information is available, the 1945 total of 568,713 marriage permits granted in these major urban areas was exceeded only once—in 1942, the national peak year for marriages. Although the 1945 total was 4.4 per cent below that for 1942 (594,908), it was 39.1 per cent higher than the estimated total for 1939 (408,989), the last year during which the United States, broadly speaking, was operating under peacetime conditions.

Two sharp marriage peaks in 1945 reflected the changing war scene. The rises during the first half of 1945 were preceded by a decline of 0.9 per cent—with a total of 258,917—from the January to June total for 1944. This minor decrease was a strong contrast to the issuance of marriage licenses in the last half of 1945 when 309,796 licenses were issued in the major cities, indicating an increase of 23.0 per cent over the July to December total for the previous year. During this part of 1945, July, November and December reached new peaks. The July rise, in large part, may have been caused by marriages during redeployment furloughs; the November and December peaks, by marriages of discharged veterans.

More than half of the men who ever marry do so before the age of 25 years, and women before the age of 22 years, according to an analysis of the Bureau of the Census. The analysis is based on the median age at the time of the first marriage for those men and women who ever marry during the course of their lives. For men who ever marry, the estimated median age at first marriage is 24.3 years; that is, one-half marry at a younger age than 24.3 years, and one-half at an older age. The corresponding figure for women is 21.6 years.

The median age at first marriage has changed by only a small amount over a long period of time. Apart from biological factors, the ages at which people marry are largely determined by social customs, which change rather slowly within a given population group or area. During any one year, of course, the number of men and women who marry is affected by economic conditions and

by the psychological temper of the people at that time, and for a short while these factors may have some effect also on age at marriage. Over long periods, however, such variations have tended to balance out.

MEDIAN AGE AT FIRST MARRIAGE FOR ALL MEN AND WOMEN WHO EVER MARRY, FOR THE UNITED STATES, COMPUTED FROM THE CENSUSES OF 1890 TO 1940

(Medians for females in 1940 based on data from Sample C for all women ever married, 45 to 64 years old. Medians for females prior to 1940 and for males in all census years estimated from complete count of male and female population by age and marital status)

Census Year	Male	Female
1940	24.3	21.6
1930	24.3	21.3
1920	24.6	21.2
1910	25.1	21.6
1900	25.9	21.9
1890	26.1	22.0

Statistics computed by life table methods show that eleven out of every twelve persons reaching the age of 15 in the United States eventually marry. According to these figures the year of age in which the largest percentage of single women are married is 23 and for single men, 26 or 27. As indicated in the accompanying table, 21.3 percent of the single women attaining the age 23 are married within a year, and likewise 17.3 per cent of the single men attaining the age 26. From these high points the percentages married in the current year decline rather slowly with increasing age, dropping below 8 per cent for women at age 32 and for men at age 36.

CHANCES OF MARRIAGE FOR SINGLE PERSONS, AS COMPUTED BY LIFE TABLE METHODS

(Based on data for period 1920-39)

Age	Percent Who Marry Within Year*		Percent Who Ever Marry ^b		Percent of Population Single, 1940	
	Male	Female	Male	Female	Male	Female
15 years	0.1	1.0	92.2	93.5	99.8	98.8
16 years	0.3	2.4	92.4	93.5	99.7	96.1
17 years	0.9	4.5	92.5	93.5	99.3	91.0
18 years	1.9	8.5	92.6	93.3	97.9	82.3
19 years	4.2	12.0	92.7	92.0	94.6	73.0
20 years	6.7	15.5	92.6	92.1	89.1	62.8
21 years	9.4	18.2	92.3	90.8	81.0	54.4
22 years	12.5	20.8	91.8	89.0	72.8	40.2
23 years	15.3	21.3	90.9	86.3	62.9	38.7
24 years	15.9	20.9	89.6	82.8	54.3	32.9
25 years	17.0	18.9	88.0	78.5	46.9	28.6
26 years	17.3	16.0	85.9	73.7	40.8	25.1
27 years	17.3	13.3	83.4	68.9	35.0	22.0
28 years	17.1	11.7	80.3	64.4	30.6	20.1
29 years	16.8	10.7	76.6	59.9	26.2	17.7
30 years	15.9	9.6	72.3	55.3	25.2	17.9
31 years	13.1	8.5	67.5	50.8	21.0	14.7
32 years	11.7	7.7	63.0	46.4	20.9	14.7
33 years	10.5	6.8	58.5	42.1	18.6	13.0
34 years	9.3	5.9	54.1	38.0	17.2	12.6
35 years	8.2	4.9	49.7	34.3		
36 years	7.2	4.4	45.6	31.0		
37 years	6.3	3.9	41.6	27.9	15.3	11.2
38 years	5.5	3.5	38.1	25.2		
39 years	4.9	3.0	34.8	22.6		
40 years	4.5	2.7	31.7	20.2	12.6	9.5
45 years	2.5	1.5	19.1	11.3	11.2	8.6
50 years	1.5	0.8	11.1	6.1	11.0	8.7
55 years	0.9	0.4	6.2	3.2	10.8	8.7
60 years	0.5	0.2	3.3	1.6	10.5	9.3
65 and over	...	..	1.9	0.8	9.8	9.3

* Percent of persons single at beginning of year of age who marry during the year. This figure indicates the chance of marriage within one year from attaining the specified age.

^b Percent of persons single at beginning of year of age who marry in that year and all later years. This figure indicates the total chance of marriage for persons who have attained the specified age.

^c Percent single in age group 40-44, 45-49, etc.: data for single years not available.

MARTINIQUE. A French island colony in the West Indies, between the British islands of Dominica and St. Lucia. Area, 385 square miles. Population (Jan. 1, 1940), 260,000, mostly Negro and mulatto, with about 5,000 whites. Fort-de-France, the capital, had 52,051 inhabitants; Le Lamentin, 16,303. Sugar, cacao, bananas, pineapples, and rum are the main products. Trade (1938; in U.S. dollars): imports \$6,756,000; exports \$8,918,000. Budget (1937): 101,100,000 francs. The colony is administered by a Governor, aided by a privy council and a general council. All citizens without regard to color enjoy the same civil and political rights as Frenchmen in the mother country. The general council, which votes the budget, and the municipal councils are elected by universal suffrage. In addition, the colony was represented in the French Parliament by 1 senator and 2 deputies. Governor: Georges Parisot (appointed Dec. 5, 1944).

MATERIAL COORDINATING COMMITTEE—United States and Canada. A Committee created May 14, 1941, to make possible the free exchange of vital information between responsible officials of Canada and the United States relating to their supplies of strategic raw materials. The United States members are William L. Batt, Edward Browning, Jr., and George H. Emery. The Canadian members are G. C. Bateman and H. J. Symington.

MEDICINE AND SURGERY. This year saw the death of Dr. Walter B. Cannon, one of America's most renowned physiologists, who died October 1, 1945, at his summer home in Franklin, New Hampshire. He had been the George Higginson professor and head of the Department of Physiology since 1906, at the Harvard Medical School, retiring in 1940 with the title of Emeritus. His 34 years in this important professorship afforded him an opportunity for tremendous influence on the lives of many living practitioners of medicine. In his book on "The Wisdom of the Body," Doctor Cannon said that his first research in the pursuit of medicine was a study of the phenomenon of swallowing. Thus began a long career of physiologic investigation. For his distinguished achievements he was awarded the Baly Medal of the Royal College of Physicians in 1931, and the gold medal of the National Institute of Social Sciences in 1934. In 1941 he was the first recipient of the Friedenwald Medal of the American Gastro-Enterological Association, in recognition of his pioneer utilization of the X-rays in gastro-enterology and his important contributions to the mechanics of digestion; to the elucidation of the sensations of hunger and thirst; and to the development of the science and practice of gastro-enterology. Doctor Cannon always maintained an interest in medical education. Early in his career he suggested the "case" method of teaching medicine. Much of his work dealt with organic conditions as affected by emotions, and his investigations resulted in established practices for controlling these conditions. His prolific contributions to scientific literature reflect his diversified interests. Among his publications are articles describing movements of the stomach and intestines; internal secretions; effects of emotional excitement; surgical shock; organic stabilization; chemical mediation of nerve impulses; medical education, and the defense of medical research. The books written by Doctor Cannon have been exceptional. The list includes *A Laboratory Course in Physiology*, 1910; *The Mechanical Factors of Digestion*; 1911; *Bodily Changes in Pain, Hunger, Fear, and Rage*, 1915; *Traumatic Shock*, 1928; *The Wisdom of the Body*,

1932; *Digestion and Health*, 1936; *Autonomic Neuro-Effector Systems*, with Arturo Rosenblueth in 1937. Just recently his autobiography, called *The Way of an Investigator* was published. As stated in his obituary in the *Journal of the American Medical Association* for October 1945, he reflects the geniality, the philosophy, and the inspiration that was a basic factor in a career that achieved true greatness.

Progress in Virus Diseases. Definite progress in the treatment of virus diseases has not been as gratifying as one could hope. Several developments, however, are worthy of mention and indicate a trend in efforts being made toward solution of the problems. These are notably, first, the development of a vaccine for typhus fever, and second, the vaccine for influenza; finally, dengue vaccine. These new materials employ the technique of the chick-yolk-sac membrane method of culture. This inspired idea of using the egg as a vaccine production plant is in the true tradition-shattering style of modern research. It has become a fairly standard procedure within half a decade. In 1938 Dr. Herald R. Cox, then in the U.S. Public Health Service, but now a member of the research staff of one of the large drug houses, discovered a new method for growing micro-organisms of the family Rickettsia. He found that the yolk-sac membrane of live chick embryos undergoing incubation was an ideal culture medium for the virus of typhus and many other infecting agents. He originally employed this method to prepare a vaccine against Rocky Mountain spotted fever. A similarity in certain aspects of Rocky Mountain spotted fever to the Rickettsia of typhus, led Doctor Cox and his co-workers to adapt the method for the large scale production of typhus vaccine virus. In developing the method improvements were suggested by the National Institute of Health. At present, extraction of a culture with an organic solvent, replaces the older method of using physiological salt solution for that purpose. Thus, within the foreseeable future, it seems likely that one of the great plague diseases of all times will be brought under control. Typhus has blotted the pages of civilization's history for a score of centuries.

By a similar method, influenza vaccine has been prepared and a considerable experience has already been gathered among the members of the armed forces. This year has seen the release of an influenza virus vaccine, a development of wartime research and now available in the last months of 1945 for civilian use. The vaccine is effective in providing protection against types A and B influenza viruses, which are the most prevalent causes of recent epidemics. Influenza virus A is the name given to the filtrable virus discovered in 1938 by Smith, Andrews, and Laidlaw. Various strains of this virus have been identified as the causes of a number of influenza epidemics. Influenza virus B was described by Francis in 1940. Ten-day incubated eggs are used for production of influenza virus, which is converted into purified and concentrated vaccine, with aseptic precautions. A puncture hole is made through the shell of the egg, the influenza seed of viruses types A and B are injected into the embryonic fluid. Eggs are then reincubated for two more days; during the 48 hours large amounts of virus develop in the allantoic fluid of the embryonated egg. The virus is separated from the fluid, first by absorption on red blood cells and cold agglutination, and then other technical means for standardization are employed. Influenza virus characteristically exerts a pathogenic effect on the epithelium of the respira-

tory system. It is thought that the infection with the type A virus is somewhat more abrupt in onset, with fever and severe constitutional symptoms, while type B virus frequently has a more gradual onset with less intensive symptoms and shorter duration. No satisfactory chemo-therapeutic antibiotic treatment of the virus infection is available, and care of the patient consists for the most part of measures that are symptomatic, supportive, or preventive of bacterial complications.

During the wide-spread epidemic of influenza in November and December of 1943, a military commission, as reported in the *Journal of the American Medical Association* for 1944, investigated the influence of the concentrated inactivated vaccine on the incidence of clinical influenza on an army specialized training program unit, comprising about 12,500 men. Subcutaneous injections of mixed influenza virus vaccine, types A and B, was found to exert a protective effect. Among 6,200 unvaccinated controls the attack rate of influenza was 7.11 percent while at the same time the attack rate among 6,263 vaccinated subjects was 2.22 percent. These favorable results led to the production of this vaccine on a large scale for the use of the armed forces. The protective effect of vaccine containing inactivated influenza viruses types A and B against induced infections with type A virus was studied by Mann and reported in the *Journal of Clinical Investigation* for July, 1945. On standard exposure to influenza virus type A no reports of serious reactions to the vaccine have appeared. The results of its use in a large percentage of the population is awaited with considerable interest.

Another study of interest comes from the Harvard University press, in the form of a book by F. M. Burnet, *Virus as Organism—Evolutionary and Ecological Aspects of Some Human Virus Diseases*. In this book a discussion of the origin of the virus is interestingly presented. In its restricted sense, the term virus is applied to agents of disease, which, so far as known, do not multiply in any medium other than living cells of a susceptible host, and which pass through standard filters holding back bacteria. Burnet in his book has reviewed the speculation concerning the origin of viruses, and their relations to other forms of life. One hypothesis assumed that viruses may be fragments from cells of high forms, foot-loose genes, which have found ways of surviving by passage from host to host. Definite evidence of any such process has not been advanced. A dominant view of the origin of viruses is that they are degraded descendants of larger pathogenic microbes, as suggested by the range of visible forms between bacteria and certain viruses. Rickettsias and psittacosis viruses resemble bacteria in several ways, but their requirements for growth are those of viruses. In the case of the smallest viruses the resemblance to bacteria is not so striking. Other possible sources may be fungi, protozoa, and spirochetes. This latest view of the origin of viruses assumes that the loss of power of chemical synthesis on the part of the descendant units was associated with adaptation to an intracellular environment in which synthetic power is not required for indefinite survival in successive hosts. This implies that viruses with, as well as without, vectors like other living beings have intricate evolutionary histories. Burnet writes "We can state dogmatically that there is no evidence whatever that any virus, whether its host be animal, plant, or bacterium arises *de novo*. Every virus particle, like any other organism derives by genetic descent from some similar particle, and in its turn possesses the power to produce under appropriate

conditions, replicas of itself." As stated in a recent editorial in the *Journal of the American Medical Association*, medical practice in public health work, and present investigation are firmly based on the principle that virus diseases breed as true to type as other infectious diseases.

Finally, the report concerning the development of dengue vaccine by Davis and his associates of the Army Epidemiological Board is also of interest, thanks to the heroic cooperation of inmates of the New Jersey State Prison, who volunteered without offer of reward to serve as subjects for numerous inoculations. In 1931 Binger attempted without success to propagate the dengue virus by intracerebral inoculations in young mice, using effective human serum as the inoculum. In the New Jersey prison experiments, this technique was varied by inoculating young mice intracerebrally, with an ultra-centrifuged concentrate of such serum: this concentrate containing approximately 10,000,000 minimum human effective doses per cubic centimeter. On the first attempt only 10 to 20 percent of the inoculated Swiss mice exhibited clinical signs of effectiveness, and then only after an incubation period of nearly four weeks. Serial passage was carried out through various generations of mice until by the ninth passage fatalities were still increased to 90 percent and by the fifteenth passage to 100 percent. It was observed that all human volunteers inoculated with a practically avirulent tenth mouse passage dengue virus, acquired a solid immunity against subsequent inoculations with fully virulent virus or to bites of mosquitoes from a batch demonstrated infective to non-immune human volunteers. Volunteers immunized with a combined dengue and yellow fever vaccine also developed neutralizing antibodies with yellow fever virus. From these preliminary successes Sabin concludes that mouse adapted dengue virus can be used safely and effectively as a prophylactic vaccine against dengue fever.

Penicillin. Penicillin continues to hold the number one spot in the medical scene. It is the wonder substance, and medical literature is filled with articles dealing with its varied applications and uses. Especially gratifying has been the price reduction since the release of the drug for civilian use on March 15, 1945—as a result of sales competition and increased production. Where at one time \$2.40 was the charge for 100,000 Oxford units, the rate for this quantity is now as low as sixty cents wholesale. The release of oral penicillin within the latter months of 1945 was an event of considerable moment, and not anticipated by many. Since the parenteral form is more economical, both in price, as well as in effectiveness, the delay of the release of the oral form was inevitable. It is now available, however, in many forms, such as tablets for oral use; troches for purposes of chewing, and various types of ointments for topical application. There seems little doubt but that penicillin given orally is quite effective. For a time it was thought that when given by mouth, to avoid inactivation, it must escape the destructive influences of gastric acidity. Studies by Finland and his co-workers would seem to indicate that penicillin given by mouth before a meal, in doses of 90,000 units gave comparable blood levels to those obtained from 15,000 to 20,000 units given intramuscularly. Whereas, with the doses given after meals, the blood levels were very irregular and unpredictable. Also achlorhydric individuals, as compared with normal ones, had much more sustained serum levels from penicillin taken before meals and higher as well as better sustained levels from the postprandial doses. Re-

ports of its effectiveness in many diseases are now at hand.

Gamma Globulin. An editorial in the June 9, 1945, issue of the *Journal of the American Medical Association* calls attention to an important fraction of blood hitherto unappreciated. This recognition grew out of the work produced by the increased demand for blood and blood substitutes to combat battle wounds and shock. At first, whole blood, because of its instability and type characteristics, did not seem to meet the requirements necessary for most efficient military application. Dried plasma was evolved, a purified concentrated solution of the albumin fraction of plasma being developed by Cohn of Harvard and his co-workers. Blood plasma was fractionated in several purified components, by physico-chemical means. Plasma proteins, which are a normal constituent of blood, consist of two albumins and three globulins—Alpha, Beta, and Gamma. In addition to fractions contributing to blood coagulation and blood typing, the albumins are the proteins which are responsible for the maintenance of plasma volume, and thus are important in the treatment of shock, hypoproteinemia and edema. Of the globulins, the gamma fraction is concerned with the phenomenon of immunity, for in this fraction of normal and convalescent plasma are found the substances which give high anti-body titer.

The albumins are formed in the liver, but until recently the origin of the globulins remained uncertain. Dougherty, Chase, and White in a recent report in the *Proceedings of the Society for Experimental Biology and Medicine*, have discovered that anti-bodies are found in the lymphocytes of the blood, and believe that the lymphoid tissue is the site of anti-body formation, as was pointed out in the 1944 review. Many attempts have been made to separate the anti-body portion of the plasma from the gamma globulins, but all have proved unsuccessful. Kass, reporting in *Science*, for March 30, 1945, has shown that the antibodies are specific modifications of the gamma globulin; that these occur in the lymphocytes, with the antigens serving as the stimulus for the modification of the gamma globulin. Thus it appears that the gamma globulin is formed in the lymphoid tissue. Further studies have led White and Dougherty to feel that the pituitary-adrenal mechanism is the normal means of controlling the release of serum globulin from the reticulo-endothelial cells. As a result of the foregoing observation, the origin of the plasma proteins has now been further elucidated. The albumins are known to be formed in the liver; various degrees of liver damage cause a reduction of the plasma albumin. The globulins are now believed to originate in the lymphoid tissue and it is believed the gamma globulin may there be modified to give rise to the various anti-bodies. The role of gamma globulin in medical practice promises to be increasingly important; depending on the isolation and production of purified preparations.

Indeed, reports have already appeared on the use of gamma globulin in the prevention of certain types of disease, notably of infectious hepatitis, an epidemic type of hepatitis, stated to be one of the most important diseases of the present war. Stokes and Neese, in the January 20, 1945, issue of the *Journal of the American Medical Association*, report on the use of the preparation of gamma globulin, which was prepared by the Harvard Plasma Fractionation Laboratory, in the prevention of infectious hepatitis to exposed persons. Owing to the lack of knowledge concerning the etiologic agent and its mode of transmission of this disease, ade-

quate methods of prevention and control have not as yet been developed. Their data, however, suggest that gamma globulin from large pools of adult human serum may be effective in the control of certain epidemics of this disease. They call attention to the fact that parenteral injections of hemologous blood products have occasionally been followed by hepatitis. These blood products have usually been derived from single individuals, or in the case of pools, from relatively small numbers of adults. The frequency with which small pools contain a "hepatitis producing" agent, suggests that such an agent might be expected in large pools with even greater frequency. Yet, several thousand injections of gamma globulin used for the prevention and attenuation of measles prepared from large pools of adult plasma have not been followed by hepatitis. It has been shown that the absence of the hepatitis following the use of gamma globulin is not necessarily explained by the inactivation of the causative agents by the process of fractionation of plasma. The neutralization of the hepatitis producing agent by anti-bodies of gamma globulin would offer, however, a possible explanation of the apparent absence of hepatitis following the injection of gamma globulin. Because the evidence thus far available suggests that the virus agent responsible for epidemics in infectious hepatitis is present in the blood during the pre-icteric and early icteric phases of the disease, it seems reasonable to postulate that such neutralizing anti-bodies in gamma globulin might possibly be effective in aborting or attenuating this disease, if administered during the incubation or pre-icteric phase. These observations led to the use of gamma globulin in an extensive epidemic occurring in a summer camp for boys and girls. The results which are statistically significant indicate that gamma globulin is capable of preventing or attenuating hepatitis when administered to exposed persons during the incubation period. This effect is comparable to that observed with the use of gamma globulin in measles. Although the data suggest that the best results are obtained when the globulin is injected early in the incubation period, it seems possible that, as in measles, it may also be of therapeutic value if given early in the pre-icteric state of hepatitis. The results obtained in this epidemic were sufficiently encouraging to warrant further trials of gamma globulin. A subsequent report by Havens and Paul, in the Sept. 22, 1945, issue of the *Journal*, further confirms the effectiveness of gamma globulin. Ninety-seven children were given the globulin and the subsequent case rate of hepatitis with jaundice was compared with that in 155 children who were left as uninoculated controls. The case rate for jaundice in the controls was about ten times that noted among the inoculated. And again, Gillis, Stokes, and others in an article in the Aug. 11, 1945, issue of the *Journal* report their experiences in an outbreak occurring in a bombardment group based in the Mediterranean theater of operations, and in various regiments of the ground forces of the same theater. The results of a few field studies support the findings of Stokes and Neese, that gamma globulin is a potent agent in the prevention of such hepatitis, and suggest that globulin confers a period of passive immunity of at least six to eight weeks. These reports are indeed encouraging and the future development in the application of this new agent in the treatment of other diseases should be awaited with great interest.

Curare. One of the newest drugs to be added to the anesthesiologist's armamentarium is curare. The

drug has been known to science since 1595 when it is mentioned in a description of Sir Walter Raleigh's voyage up the Orinoco. In 1938, Richard C. Gill, an American who had lived for years in the upper Amazonian jungles of Ecuador, wrote of the mysticism surrounding the "flying death" as curare is called in that region. Prof. A. R. McIntyre of the University of Nebraska made the first extensive pharmacologic study of the drug with the idea of its clinical application. In cooperation with the E. R. Squibb and Sons Laboratories, a purified product was made in which its toxic side effects were removed. The resultant commercial product was given the name "Intocostrin" and has 20 mgm. of the drug to each cubic centimeter. The plant from which the drug is now extracted is the *Chondrodendron tomentosum*, having a selective action affecting first the muscles of the throat and neck, then the skeletal muscles of the extremities, chest and abdomen, and the diaphragm last or not at all.

The first test of Intocostrin on human subjects was made by Professor A. E. Bennett on the University of Nebraska who used it to soften the convulsive manifestations of shock therapy in psychiatric patients. Its application to the field of anesthesia is first recorded by Dr. Harold R. Griffith of Montreal, Canada, at the suggestion of Dr. T. H. Wright of New York. Dr. Griffith, working at the Homeopathic Hospital at Montreal, started his work in January of 1942. Considerable work has been done, in both experimental and clinical fields, by Dr. S. C. Cullen at the State University of Iowa Hospitals and Laboratories, and he has reported recently 1,000 successful administrations.

Although the drug demonstrates no parenchymal tissue damage and is self-limiting and short-acting, both Griffith and Cullen urge its use only by those who are well trained in the field of anesthesia.

Carcinoma of the Mid-thoracic Esophagus. Carcinoma of the esophagus has long been the most serious form of concern involving the gastro-intestinal tract, since cure by x-ray or radium treatment is almost never accomplished. For all practical purposes, the only hope lies in extirpation of the growth and of any regional lymph nodes involved by the disease. Although Dr. Torek of New York, in 1913, reported a successful cure of carcinoma of the middle portion of the esophagus accomplished by operative excision, until the last few years, successful cases have been relatively few. In the past decade, however, the technical problems involved in intrathoracic operations have become much more clearly understood, and during the past five years, cancers arising in the lower third of the esophagus have in many instances been removed successfully. Tumors lying in this region, that is in the lower end of the esophagus, may be widely excised and the continuity of the gastro-intestinal tract restored by anastomosis of the proximal esophageal segment to the stomach. Until quite recently, however, it has been considered impossible to remove tumors lying in the middle third of the esophagus and still safely unite the short upper end of the esophagus with the stomach. During the past year two workers have shown that this can safely be done. In 1944, Garlock of New York reported the successful reestablishment of esophagogastric continuity following a resection of the esophagus for carcinoma of the middle third. This year, R. H. Sweet of the Massachusetts General Hospital in Boston reported his experience with 20 such operations.

Garlock and Sweet were able to anastomose the short proximal esophageal segment to the stomach

by a maneuver which permitted them to draw the stomach into the thorax. This was accomplished by dividing many of the abdominal attachments of the stomach and a goodly portion of its blood supply. The anastomosis is carried out either below or above the arch of the aorta depending upon how high in the esophagus the tumor lies. Of Sweet's twenty cases, in twelve anastomosis was performed above the aortic arch, and in eight below. In the entire series, there were six deaths, a mortality rate of thirty percent, which in anastomosis is remarkably low.

Since carcinoma of the esophagus is frequently far advanced before diagnosis is made and operation undertaken, the ultimate percentage of cures of the disease by this new procedure will not be known until a series of cases have been observed for an adequate time after operation. It does seem clear, however, that this new technique not only will result in more cures than did previous methods, but that the life of the patient will be much more comfortable after this type of procedure than after the original one described by Torek—in which no attempt was made to restore gastro-intestinal continuity and the upper end of the esophagus was brought out through the neck. Certainly as a palliative, and very probably as a possible ultimate cure, the procedure of transthoracic esophagogastronomy will be of great value.

The Surgical Treatment of Congenital Malformations of the Heart. Of great interest during the past year was the report by Alfred Blalock and Helen B. Taussig concerning the development and clinical application of an operative procedure for certain congenital malformations of the heart. In these cases, because of stenosis or atresia of the pulmonary artery, there is an inadequate flow of blood through the lungs. The most striking feature of infants or children with this anomaly is persistent marked cyanosis. These are the so-called "blue" babies with whom all are familiar. In some instances, anomalies of this type are doomed; in others, survival up to or even beyond adolescence occasionally occurs. The prospects for living this long, however, are poor because of the danger of death from anoxemia or from blood clots in the brain. Furthermore, many of the children who do survive for several years are invalidated by extreme shortness of breath.

On the basis of the clinical studies of Taussig, and Blalock's experimental investigations showing the feasibility of uniting a large systemic artery to one of the pulmonary arteries, it was attempted to increase the blood flowing through the lungs by joining the severed end of one of the large branches of the aorta to one of the pulmonary arteries. It was hoped that the fundamental physiologic disturbance, which is an inadequate aeration of the blood due to decreased flow to the lung, might be remedied. In May, 1945, Blalock and Taussig reported that such a procedure had been carried out in three patients, each of whom had a severe degree of anoxemia. Each of these three survived and was apparently greatly benefited by the procedure. They state, "Clinical evidence of improvement has been striking and includes a pronounced decrease in the intensity of the cyanosis, a decrease in dyspnea and an increase in tolerance to exercise." In two of these patients, in whom the problem of the degree of oxygen lack could be studied by laboratory procedures, there was definite objective evidence of an increase in the oxygen content of the blood as well as of its oxygen saturation following the production of this artificial fistula between the aorta and the pulmonary artery.

It should be emphasized that not all such congenital malformations may be benefited by such a procedure, but only those in whom partial or complete obstruction of the pulmonary artery greatly limits the flow from the heart to the lungs and therefore results in inadequate oxygenation. The authors state, "The type of abnormalities which should be benefited by this operation are the tetralogy of Fallot, pulmonary atresia with or without dextroposition of the aorta and with or without defective development of the right ventricle, a truncus arteriosus with bronchial arteries, and a single ventricle with a rudimentary outlet chamber in which the pulmonary artery is diminutive in size. The operation is indicated only when there is clinical and radiologic evidence of decrease in the pulmonary blood flow. It must be emphasized that the operation should not be performed when studies reveal a prominent pulmonary conus or pulsations at the hili of the lungs." Since the procedure is a new and relatively untried one, the ultimate results cannot be predicted. It is possible that the production of an abnormal arteriovenous fistula of this type may later be associated with the development of a bacterial inception at the site of the anastomosis (subacute bacterial endocarditis), or that cardiac failure of the type occasionally seen in the presence of a persistent ductus arteriosus may occur. However, these risks are only conjectural ones, and it seems certain that at least these three children have been relieved from their present extreme incapacity and the danger of early death.

Since Blalock's report in May, a number of other children with serious malformations of this type have been subjected to operations and the greater part of these have been operated upon successfully.

The Surgical Correction of Coarctation of the Aorta. Coarctation of the aorta is an unusual congenital abnormality characterized by great narrowing of the lumen of the vessel, usually at or near its junction with the ductus arteriosus. The cause of this developmental anomaly is unknown. Although many persons with this condition may have a reasonably long life and suffer but little incapacitation, in others, serious complications are apt to develop if the degree of obstruction of the vessel is great. The most important of these is severe hypertension in the upper half of the body which may even result in heart failure, cerebral hemorrhage, or any of the other well known complications of high blood pressure. Less common complications are the development of aneurysmal dilatation above or below the zone of narrowing, rupture of the vessel, and finally, a bacterial infection of the aorta at the site of narrowing.

Recently, several groups of workers have studied the problem of relieving aortic obstruction by surgery. In September, Gross, of the Children's Hospital in Boston, reported his experience in division and suture of the aorta in the experimental animal and also in two patients. Gross's experimental studies made with dogs were aimed at developing a safe technic for exercising a portion of the aorta and reuniting the severed ends. He found that the animals withstood the complete occlusion of the aorta, which was required during the period of division and suture, very well as far as their heart was concerned, but that a certain percentage developed paralysis of the hind limbs presumably due to an ischemia of the lower portion of the spinal cord during the period of aortic occlusion. He devised special clamps, and after trying various methods of suture, found that a continuous through and through stitch which everted the divided ends

afforded the safest and most satisfactory closure. As a result of his studies, he was led to believe that it was technically feasible to remove a narrowed portion of the aorta en masse and to reestablish its continuity by careful and accurate end-to-end anastomosis. In June and again in July of this year, the procedure was carried out in two children. The first, a boy of six, withstood the operative procedure well, but as soon as the clamp was removed from the proximal end of the aorta and the enormous vascular bed opened up, the heart suddenly went into uncontrollable dilatation and the child died. This catastrophic experience emphasized the point that the aortic clamps must be removed slowly so that an unbearable strain will not be placed upon the heart.

The second patient, a twelve-year-old girl, was operated upon because of marked hypertension and not only withstood the operative procedure without incident, but made an uneventful recovery. The systolic blood pressure in the arms, which before operating was frequently found to be as high as 215, dropped after the procedure to 140, and the blood pressure in the legs, which was unobtainable before the operation, was recorded as 145 following operation.

Gross's successful case demonstrates clearly that this congenital anomaly, often the cause of invalidism and death, may be successfully treated by surgical means. It seems reasonable to suppose that with increasing experience, a successful outcome may be expected from the procedure in most cases.

It has been reported that the Swedish surgeon, Craaford, has successfully operated upon four patients with coarctation of the aorta by a technic similar to that described by Gross with a successful result in each instance. The report of Craaford's experiences is not yet available.

Portal Hypertension. This term is used for a condition characterized by increased pressure in the portal vein and its tributaries. This venous channel which carries blood from the gastro-intestinal tract and its appendages (gallbladder, pancreas, and spleen) to the liver may be obstructed in several different ways. Perhaps the most common obstruction, resulting in increased pressure within the portal system, is cirrhosis of the liver of the so-called alcoholic or Laennec's variety. The block, however, may be extrahepatic instead of intrahepatic. Extrahepatic obstructions are of two main parts. The first of these is a replacement of the vein or its main tributaries with fibrous tissue or scar tissue with little or no canalization. The most common causative factor in this type of obstruction is thrombosis of the portal vein or one of its main tributaries due to inflammation, trauma, pressure from without, or pressure from adjacent inflammatory or neoplastic tissue. The second rare cause of this chronic occlusion is seen in young children in whom the normal obliterative fibrotic process that takes place at birth in the umbilical veins and ductus venosus extends into the left portal vein or even into the main portal vein. Another variety of common occlusion of the portal vein, as yet poorly understood, is termed "cavernomatous transformation." In this condition, the vein or its main tributaries is replaced by a tortuous mass of small blood vessels.

As a result of chronic portal obstruction, due either to disease within the liver or to obstruction of the vein before it enters the liver, certain fairly typical clinical changes usually occur. This was noted as long ago as 1883 by Banti, and the term Banti's Syndrome is still commonly applied to this symptom complex although it now appears that

Banti's ideas concerning the etiology of the disease were not correct. The changes are enlargement of the spleen, anemia, a decrease in the white blood corpuscles and in the platelets plus evidences of the development of a few collateral circulations between the portal venous system and the systemic venous system, and finally characteristic histologic changes in the spleen.

The development of a collateral venous circulation affords a certain degree of temporary relief of the portal hypertension. Interestingly enough, it is hemorrhage from dilated esophageal veins which forms a part of the collateral pathway that is frequently responsible for the death of patients with portal obstructions. Fatal bleeding from esophageal varices is therefore common, especially with cirrhosis of the liver, and may even be seen in infants or young children in whom the portal block is due to extrahepatic obstruction of the veins.

Much of our present knowledge concerning the clinical aspects of portal hypertension is due to the careful study of Dr. Allen O. Whipple and his associates in the Spleen Clinic of the Presbyterian Hospital and the Department of Surgery at the Columbia University in New York. Recently Dr. Whipple and one of his colleagues, Dr. Arthur H. Blakemore, have devised a technique for shunting all or a part of the portal blood into the systemic circulation in cases of portal hypertension. This promises to be of great clinical value.

It should first be indicated that the previous surgical methods of treating portal hypertension have not been very satisfactory. Probably the most widely used measure was removal of the spleen. This procedure removed a large load of the portal blood, estimated to be about 40 percent of the total, and was usually followed by considerable temporary relief. In the rare cases in which the portal block was in the splenic vein, the removal of the spleen resulted in a permanent cure, but unfortunately, this is not a common site for a portal bed block; in the many cases where the block was either in the liver or in some other part of the portal veins distal to the splenic veins, the relief was only temporary. Other operations designed to improve the collateral circulation, such as the suture of the omentum to the abdominal wall, were not very satisfactory, nor were attempts to prevent bleeding by ligation of the veins leading into the cardiac end of the stomach and esophagus. As a matter of fact, these procedures, if successful, shunt off one of the chief collaterals between the portal and systemic circuits and increase the hypertension. There were usually, therefore, recurrent varices. Attempts at obliteration of the esophageal varices by the injection of sclerosing solutions also have not been very satisfactory. Whipple and Blakemore have tried two types of procedures in these cases. In the first, the spleen and left kidney are removed and the splenic vein anastomosed to the left renal vein. In the second type of procedure, the portal vein is divided just before it enters the liver and the lower end joined to the vena cava. These technical procedures have been made possible by development by Blakemore and his co-workers of a so-called nonsuture method of blood vessel anastomosis. In brief, this procedure consists of everting the end of a vein or artery over the end of a short funnel-shaped vitallium tube, the endothelial surface then being introduced into the end of another vein or artery to maintain the blood flow, thus avoiding thrombosis because of the intact endothelial lining. By using such tubes at either end of the vein grafts, vascular defects in arteries or veins can be effectually bridged. This

technic of Blakemore's has proved useful in a wide variety of vascular surgery, but seems nowhere more applicable than in the treatment of portal hypertension. In October, 1945, Dr. Allen O. Whipple reported that he and Blakemore had carried out ten operations for the relief of portal hypertension. In five, the splenic vein and left renal vein were united. In the last five, the portal vein was anastomosed to the side of the inferior vena cava. All patients survived the operations. While the procedures were purely experimental and were carried out only on patients who had had repeated severe hemorrhages and for whom conservative measures offered no hope, the early results have been very encouraging.

Dr. Whipple states that four other splenorenal vein anastomoses have been performed recently by Dr. Alfred Blalock, with disappearance of the ascites and remarkable improvement in two cases. In the other two, however, death from recurrent bleeding from esophageal varices occurred. Dr. Blalock thought that this might be due to occlusion of the anastomosis.

The efforts at portocaval shunt, while still in the experimental stage, seem to be the most rational attempts which have yet been devised to relieve portal hypertension, and it seems likely that they may find a real place in the treatment of the victims of portal vein obstruction.

WILLIAM H. POTTS.

MELLON INSTITUTE. The aim of Mellon Institute is the creation of new knowledge by scientific investigation, in accordance with the institution's definite fellowship system. According to this procedure the researches are restricted to major problems of the pure and applied sciences and particularly chemistry—problems that require protracted periods of time for solution by specialists. The Institute was founded by Andrew W. Mellon and Richard B. Mellon in 1913 and is located at 4400 Fifth Avenue, Pittsburgh, Pa. It is a non-profit institution.

The industrial research of the Institute is organized on a contract basis, the problem being set by a person, firm, or association interested in its solution, the scientific worker being found and engaged by the Institute, and an industrial fellowship being assigned for a period of at least a year. Each holder of an industrial fellowship is given broad facilities for accomplishing the research entrusted to him and all results belong exclusively to the donor of the fellowship. Only one investigation is conducted on a specific subject at any one time and hence there is no duplication of the research activities of the fellowships in operation. At present there are 94 of these industrial fellowships, which employ 474 scientists and engineers. The projects range from ferrous metallurgy and refractories to novel pharmaceuticals or medicinal agents, synthetic rubber, new plastics and textiles, and improvements in foods and other essential commodities. All the work during wartime has related to urgent military problems. The Institute's department of research in pure chemistry is concentrating on the synthesis of antimalarials.

MENNONITES. A religious group founded in Switzerland in 1525 in protest against ecclesiastical rule and rigid liturgy. In the United States the Mennonites first settled at Germantown, Pa., in 1683, ultimately dividing into 17 bodies. For statistics, see RELIGIOUS ORGANIZATIONS.

MERCURY (Quicksilver). Use of more than one-half of all the mercury consumed in the United States

in 1945 for the production of so-called "tropical" dry cells constituted probably the most spectacular development in any of the common metals in 1945. These batteries, which have the advantage of minute size, constant electrical output, and resistance to climatic deterioration, first appeared as a major consumer late in 1944 and almost as rapidly declined following the end of the Japanese war. The feasibility of their adaptation to peacetime uses probably will determine to a large extent postwar demand for mercury.

Mercury consumption during 1945 totalled approximately 63,900 76-lb. flasks, with a rapidly declining rate of use after the middle of the year. In 1944, 42,900 flasks were consumed. Principal uses, other than in battery manufacture, were for pharmaceuticals, electrical apparatus, paint, disinfectants and fungicides, and as a detonator for explosives.

Domestic mine production dropped to 30,600 76-lb. flasks in 1945 as a direct result of a price decline from an average of \$165.55 per flask in February to \$108 per flask at the end of the year. Mercury was released from price control Aug. 29. Although many mines ceased or curtailed operations, about 69 per cent of the production came from California, with smaller amounts from Oregon, Idaho, Nevada, Texas, Arkansas, and Alaska. About 40,000 flasks were imported from Spain during the peak of the battery program, constituting the first heavy imports from this source since the beginning of the war. Total imports from all sources were 71,508 flasks in 1945. About 20,000 flasks were in private stocks and 63,640 flasks in government stocks at the end of 1945.

CHARLES T. POST.

METEOROLOGY. The Weather Bureau. During the fiscal year ending June 30, 1945, the improved military situation permitted the Weather Bureau to resume a portion of its regular services which had been curtailed at the outbreak of the war. Nevertheless, the Weather Bureau's activities were still directed primarily toward service to the war effort, especially to war industries, agriculture and transportation, including air commerce. The Weather Bureau gave direct aid to the military services through a number of special projects and by loan of meteorologists for active theater assignments; direct aid was also provided for a few of the military units within the United States, and the general activities of the Weather Bureau were coordinated with military plans and operations through the Joint and Combined Meteorological Committees of the Army, Navy and Weather Bureau.

With the end of the war in Europe, military restrictions on the publication of weather information were lifted and the Weather Bureau began reconversion of its services to peacetime uses. Weather news quickly resumed its place in the daily press and radio as one of the more important and newsworthy subjects.

After the close of the war in the Pacific the Weather Bureau continued its progress in reconversion to a peacetime basis and also took up the problem of reinstating those of its employees who had served in the armed forces and of whatever other veterans it could use. The more important service activities of the Weather Bureau are described briefly below.

In the meteorological service for aviation, weather forecast coverage was increased during the year to meet demands for both the airways and the terminals. Service was added at 14 terminals bringing the total number of terminals for which

regular forecasts are issued to 272. The mileage of civil airways for which airway forecasts are made was increased about 500 miles to a new total of 34,885 miles. The Flight Advisory Weather Service, established in 1943 to serve the needs of the Army Air Forces Flight Service units in Airway Traffic Control Centers of the Civil Aeronautics Administration, was enlarged. The Weather Bureau also expanded its transoceanic weather service during the year and assisted in plans for postwar international air commerce. The special ocean forecasting units at New York, N. Y., Baltimore, Md., Washington, D. C., and Miami, Fla., were enlarged in order to give better service to both civil and military transoceanic flights.

Several important developments in the hurricane warning service were made during the year. The program for reconnaissance flights by military pilots into storm areas or suspected storm areas was augmented, thus providing increased numbers of observations from significant places which might be of aid in determining the strength and location of these tropical disturbances. Three automatic weather stations were established in the Florida area for getting and transmitting information from remote points. Two of the stations are on islands considerably east of the southern tip of the Florida Peninsula, while the third is at Cape Sable. These stations, which are completely unattended except for periodic servicing, broadcast the barometric pressure and the wind speed and direction at scheduled intervals. These installations are designed to withstand the passage of a hurricane and the information from these robot stations is of much value in supplementing the information from the regular and more accessible stations. The special teletype circuit, already in use, for the transmission of hurricane information was extended to connect with Charleston, Savannah, Atlanta, Austin and Fort Worth and an additional special circuit was installed, connecting forecast offices at Boston, New York, Washington and Miami in order to provide closer coordination during hurricanes.

The Horticultural Protection Service or "Fruit-Frost" Service has furnished specialized forecasts for orchard heating and other frost protection measures. The lifting of the military restrictions on weather information in the United States permitted the increased use of radio for getting the forecasts to the fruit growers. Considerable progress was made in the development of service for agriculture in general wherever personnel and facilities could be obtained. At a number of new places, microphones were installed in Weather Bureau Offices through the cooperation of local radio stations, and weather broadcasts were directed to farmers, ranchers, and other agricultural interests. The Fire-Weather Service, furnishing localized forecasts to fire-control agencies in forest areas, was expanded.

The Flood forecast service was also expanded. The development of techniques for forecasting runoff from mountain snow fields two to six months in advance was continued and forecasts of this type were prepared for the Columbia River Basin in the spring of 1945. The forecasts permitted the formulation of plans for irrigation and power generation for longer periods of time than in previous years. Research in the subjects of snow measurement and the physics of snow was continued and a new type of snow storage gage capable of operating for an entire winter without attendance was perfected and field installations made. The quantitative rainfall forecast service, also an aid to river forecasting as well as to flood control work and hydroelectric power development, was improved. During the

year two more cooperative reporting networks (in the Snake and Delaware River Basins) were organized bringing the total number of such networks to 18. This work has been carried on in cooperation with the U.S. Army Corps of Engineers, and will supply additional reports for use in flood control operations and flood forecasting.

The Weather Bureau continued its collaboration with the United States Army Corps of Engineers also in connection with the storm classification program and during the year 80 additional studies of storms were completed. The Weather Bureau prepared a report on thunderstorm rainfall which is expected to be published shortly; this report is an exhaustive compilation of data which were analyzed, charted and tabulated and is part of the basic preparation for the intensive program of thunderstorm research about to be undertaken by the Weather Bureau.

Several improvements in the printed Washington Daily Weather Map were begun. The reverse side of this map is now devoted to special articles, charts, climatological studies, and other material designed to be of use in the interpretation of the weather map and in its application to problems affected by weather.

A recorder was developed for use with the ceilometer, which the Weather Bureau plans to install at all major airports. This instrument will provide a continuous record of cloud height over a station as well as the presence of precipitation or fog.

The Latin American meteorological training program, begun in 1943, continued; eight new students were brought to the United States for training at the professional level. Of the group which began training the preceding year some were given further training at San Juan, P.R., in tropical meteorology while the others were given intern training at Weather Bureau forecast centers to learn firsthand how to give efficient weather service to transportation, industry and agriculture. As an adjunct to this training program the Weather Bureau translated two elementary books on applied meteorology into Spanish.

Other activities of the Weather Bureau during the year worthy of mention have been in connection with international cooperation in meteorology. The atmosphere envelops the globe, and meteorological science with its applications in various kinds of services is dependent on world-wide exchange of weather reports. Through the State Department Office of Cultural Relations with American Republics, funds were secured to establish a radio-sonde observational program at the National Observatory of Cuba at Havana. In Mexico the radio-sonde observations are also made under a cooperative agreement similar to the one arranged with the Cuban Government. Arrangements were made with French West Indian officials, through the State Department, for more weather reports. International cooperation was also promoted by a visit of Weather Bureau Officials to Russia with scientists from other fields and other countries as a result of an invitation in June from the Russian Academy of Sciences.

The regular appropriation for the Weather Bureau's use for the fiscal year ending June 30, 1945, was \$12,700,000 and for that ending June 30, 1946, is \$12,540,000. The full-time personnel on June 30, 1945, was 3,975.

Hurricanes. During 1945 there were 10 tropical hurricanes in the North Atlantic.

I. Hurricane of June 20-27. This tropical storm formed in the western Caribbean Sea between

Swan Island and the coast of Honduras. From here, the storm, attended by moderate gales and squalls, moved through the Yucatan Channel and Gulf of Mexico in a general northerly direction to latitude 27.5° where it turned abruptly northeastward and crossed the Florida peninsula and moved into the Atlantic between Daytona Beach and St. Augustine on June 24. Over the Atlantic it continued to move northeastward remaining nearly parallel with and about 60 miles away from the coast. Damage from this storm was not heavy and no deaths or serious injuries were reported. Communications were disrupted over small areas and there was some damage to crops and buildings mainly from the excessive rains and flooding rather than the high winds. In most areas the passage of the storm was more beneficial than damaging as the heavy rains which accompanied it broke a 12-months drought which had become one of the worst in Florida's history.

II. Storm of July 19-21. This was a slight disturbance formed in the western Gulf of Mexico. It moved in a general westerly direction and crossed into Texas a little to the north of Brownsville.

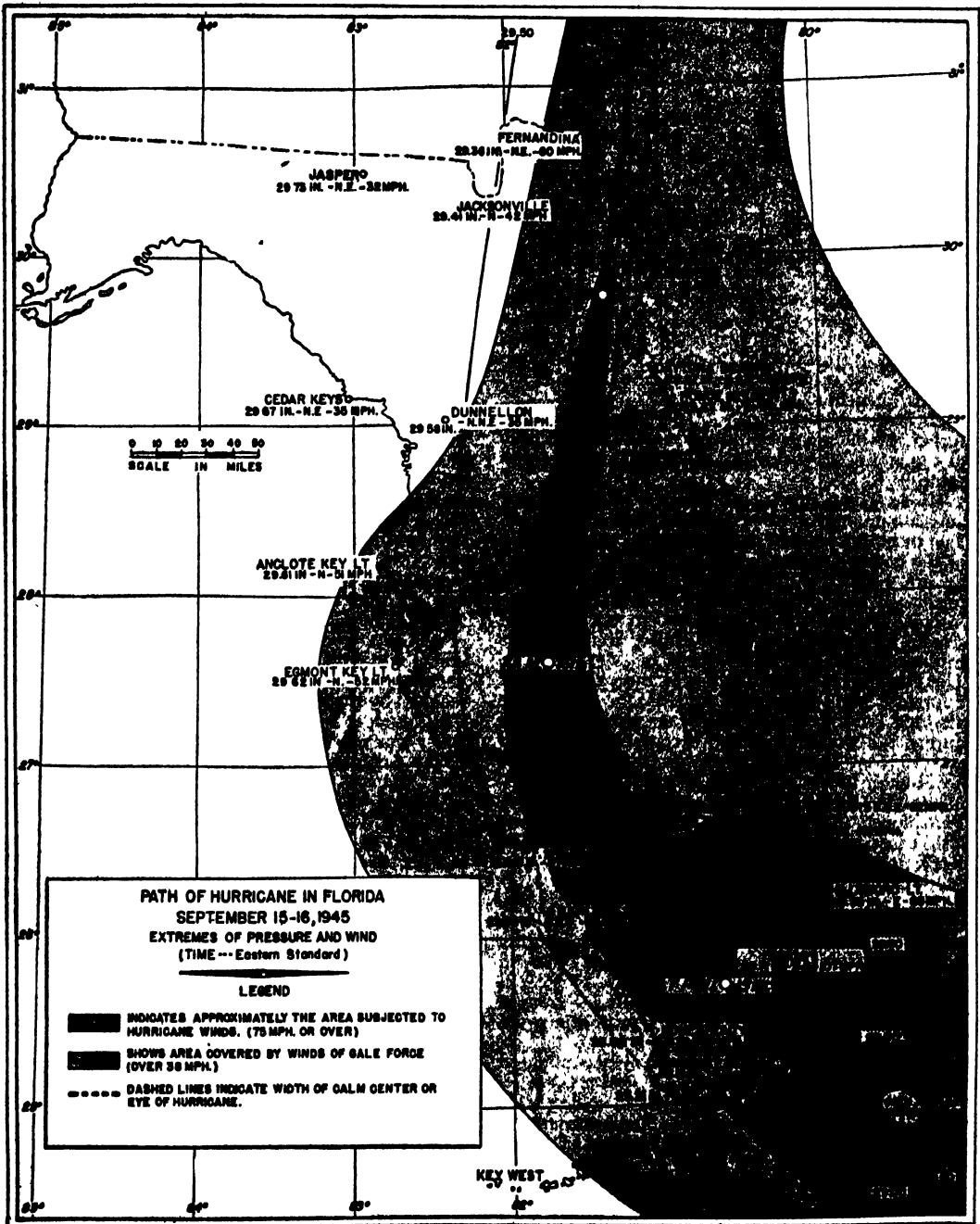
III. Tropical disturbance of August 2-4. This storm appeared east of the Lesser Antilles on August 1, moved west-northwestward between the islands of Guadeloupe and Dominica on the 2nd and thence passed south of Puerto Rico. It crossed the southern coastline of the Dominican Republic on the 4th and dissipated as it moved inland. No winds over Beaufort force 9 (47-54 miles per hour) accompanied the storm.

IV. Tropical storm of August 17-21. This storm moved about parallel to the one which immediately preceded it (August 2-4) but its path was about 200 miles farther north. No winds stronger than Beaufort force 9 accompanied this storm; it dissipated over the ocean between Cuba and the Bahama Islands.

V. Storm of August 24-29; "The Texas Hurricane." This was one of the most severe hurricanes in Texas history. Damage at Corpus Christi and in other areas along the south coast was the heaviest since the destructive September hurricane of 1933. While the area of hurricane winds and gales associated with this storm was only moderate, records show that no hurricane of such intensity ever paralleled the coast of Texas for so great a distance. Fully two-thirds of the Texas coast and the off shore islands were subjected to winds of full hurricane force. The center of this storm moved inland near Pt. Aransas; at this station a 20-minute lull in the wind between 1 and 2 A.M. (Local Standard Time) on the 27th indicated the passage of the eye. The center passed a short distance south of Seadrift, Texas and to the north of Port O'Connor but neither of these places experienced a calm although they are only 19 miles apart. This storm dissipated in the interior of Texas on the 29th. The highest recorded wind was 105 miles per hour at Port O'Connor when the anemometer was broken. Winds of 135 miles per hour were estimated. The lowest pressure recorded was 28.57 inches at Camp Hulen, Palacios, Texas. Tides were built up considerably as a result of the slow forward movement of the center; Port Lavaca had a tide of 15.0 feet. At Houston, 13.03 inches of rain fell during the passage of this storm, in fact, 9.39 inches of this total fell within a six-hour period; along the coast rainfalls were estimated as high as 30 inches.

Only three deaths were caused by this hurricane. Property damage, however, was high, over \$20,000,000.

VI. Storm of August 30-31. This was a slight tropical disturbance which originated in the Carib-



PATH OF FLORIDA HURRICANE OF SEPT. 15-16

bean Sea and moved westward and crossed inland at Belize, British Honduras and then dissipated.

VII. *Storm of September 3-4.* This storm originated south of the west end of Cuba and moved generally northward nearly to Tampa, Fla., where it became extinct. It was of slight intensity.

VIII. *Storm of September 10-12.* This storm was first observed east of the Leeward Islands. It moved northwestward and then curved to the northward and faded out just as it passed 100 miles west of Bermuda on the 12th. This storm was never

a well developed system but at the time it was northeast of the Leeward Islands reconnaissance planes estimated winds of 60 miles an hour.

IX. *Hurricane of September 11-20. "The Florida Hurricane."* This was the most severe hurricane in 1945. It was first noted east of the Leeward Islands on September 11 and thence moved on a west-northwest course passing north of Puerto Rico on the 13th and very near Turks Island the following night. It began a slow curvature to the northwest while passing over the Great Bahama Banks

during the night of Sept. 14-15 and struck Florida with its center over Key Largo on the afternoon of the 15th. The storm then traversed the Everglades and passed out into the Atlantic near St. Augustine on the night of the 16th. After leaving Florida, the storm skirted the coast of Georgia and passed into South Carolina near Parris Island on the morning of the 17th. The winds of the storm steadily diminished but heavy rains accompanied it until it finally became lost in the New England States.

The highest wind recorded was 138 miles per hour at Carysfort Reef Light. The lowest pressure recorded was 28.09 inches at the Homestead Army Air Base.

Only four people were killed in Florida, but the property damage was about \$60,000,000. Most of this was in Dade County. In the Bahama Islands 28 people were killed. The motor vessel "Captain Roberts" was sunk on the Bahama Bank as a result of this hurricane.

X. Storm of October 2-4. This was a slight disturbance which moved nearly parallel to the path of the storm of August 30-31 but about 100 miles south.

Floods. There were notable floods during the year and a number of new records were established. The most outstanding flood, from the point of view of the nation's economy was that on the Ohio River in late February and March. This flood was the result of precipitation centered over the Ohio Valley. The flood was more severe on the main stream, from Pittsburgh to Cairo, than on the tributaries, none of which were in extreme flood. The Ohio River started to rise in the latter part of February and culminated in March. The stage attained by this flood was higher than all others during the present century except those of 1913 and 1937 at Portsmouth, Ohio, Cincinnati, Ohio, Evansville, Ind., and Cairo, Ill., and the intervening reaches of the river between these cities. Above Portsmouth, Ohio, the stages reached in 1945 were also exceeded in other years besides 1913 and 1945; but at Louisville, Ky., the 1945 flood was exceeded only by that of 1937.

The Ohio River normally shows a rise in stage during the winter months, reaching a peak in March and falling steadily to a lowest stage during the summer months. The past year, 1945, was no exception to this rule, it was just an extreme example. Most of the Ohio Basin suffered from a serious drought after May, 1944, resulting in quite low river stages. During December, 1944, and January, 1945, large amounts of snow accumulated in Western Pennsylvania. The snow cover there by early February was as great as and in some places exceeded the amounts that prevailed prior to the disastrous flood of March, 1936. A series of heavy rains began the second week in February and lasted until March 7 and covered most of the Ohio Basin. As heavy rains continued intermittently, the river rose steadily, exceeding the established flood stage of 40 feet at Cairo, Ill., on February 23. Two days later the river reached flood stage at Evansville, Ind., and on the 27th and 28th the flood level was exceeded at Cincinnati, Ohio, and Pittsburgh, Pa. By the 4th of March the entire Ohio River was in flood. On March 5-6, the final rainstorm of the series occurred with the heaviest rain directly over and along the entire river causing the river to rise sharply. The total rainfall during the period February 7 to March 7 exceeded 8 inches over a wide belt, the center of this belt being almost directly over the Ohio River.

Rapidly rising flood waters resulted in loss of life and heavy property damage by flooding of

large areas of low farmlands, by closing of coal mines and many industrial plants manufacturing war materials and by disrupting transportation and flooding of many homes. According to records of the American Red Cross 24 lives were lost as a result of the flood.

The floods of March and April in the rivers of Kansas, Missouri, Oklahoma and Arkansas, were important and it was these floods which established most of the new records. Rainfall over the state of Arkansas during March was unusually heavy, averaging over 11 inches, for the entire state. Many stations recorded a depth of 15 inches for the month and a few as many as 18 inches. All rivers in Arkansas exceeded flood stage in March. Two or more rises occurred on all the rivers and the lower portions of the White and Ouachita Rivers were in flood the entire month. In March, rain was also heavy in Kansas and Oklahoma and some flooding occurred in these states.

Frequent heavy rains from late March through the middle of April over a broad belt from Kansas and Missouri southward to Louisiana and Texas produced widespread flooding in this area. Run-off was above normal in the area for the preceding three months and soil conditions were thus favorable for a very high percentage of run-off from the April rainfall. The Missouri River exceeded flood stage from Kansas City, Mo., downstream, but maximum stages were not approached. The flood in the Gasconade River was within two feet of the crest reached by the record stage of 1897, and the Osage River at La Cygne, Kans., approached within a tenth of a foot the record stage reached by the flood of April, 1944. Below (east of), the Kansas-Missouri line, the flood in the Osage River was relatively less severe. During April many of the Arkansas River tributaries in Arkansas, Missouri, Kansas, and Oklahoma reached stages near or above the highest stages ever recorded. At Seminole, Okla., a little more than 12 inches of rain fell in 9 hours on April 13; many of the smaller streams in the vicinity of Seminole were several feet higher than ever before known, and some loss of life was reported. Record stages were exceeded on the White River, and the crest of the Arkansas River at Van Buren, Ark., exceeded slightly the stage reached in May, 1943 (however, the peak discharge at Van Buren was about 200,000 c.f.s. less according to the U. S. Geological Survey). Record-breaking stages were reached on the Ouachita, Black, Little, Sulphur, Cypress, and Red Rivers as well as many of the smaller streams in this area. The Red River flood in Louisiana was particularly severe and caused extensive damage. At Fulton, and Garland, Arkansas, on the Red River the stage reached was 1 foot higher than the previous record; at Grand Ecore, La., it was 5 feet higher. Widespread damage resulted to roads, railroads, homes and farms. The American Red Cross reported that nearly 40,000 persons were evacuated from their homes; and it is estimated that about 1,500,000 acres of rich farming and grazing lands were flooded.

High water stages prevailed in the Lower Mississippi River and the Atchafalaya River throughout the month of April. Crests reached in the Mississippi River below the mouth of the Red exceeded the stages reached during the flood of 1937 but they were from 1 to 2 feet below record stages. The stage at New Orleans, La., was kept below 20 feet by diverting water through the Bonnet Carre Spillway.

The month of September was wet over most of the United States; the total fall for this month

was the greatest of record in Missouri, Oklahoma and West Virginia, while in several other states it was the wettest September in the last 10 to 20 years. Arkansas had the largest total since 1913 and the second greatest of record. This excessive precipitation for September caused light to moderately high overflows in some of the streams of Virginia, West Virginia, and eastern Pennsylvania; and high but not extreme flooding in the tributary streams of the Red River and the middle Arkansas basin. This excessive September rainfall was in part the cause of the record breaking floods in the eastern portions of North and South Carolina but these floods were primarily due to the Florida Hurricane which crossed the South Carolina Coast Line near Charleston and moved slowly northward across the central Carolinas. Previous flood records were broken in the Cape Fear, Haw, Neuse and Pee Dee Rivers. In the other rivers of the Carolinas the rainfall was sufficiently favorably distributed so that extreme flood stages were not attained. At Fayetteville, N.C., the flood crest was 68.9 feet compared to 68.0 in 1908 and at Elizabethtown the 1945 stage was 43.2 compared to 39.1 in 1928. At Cheraw, S. C., on the Pee Dee River the stage reached 49.4 feet, exceeding the previous record of 1908 by 2.2 feet. At Effingham, S.C., the Lynches River exceeded the previous record by 1.2 feet and at Moncure, N.C., on the Haw River the flood stage exceeded the previous record by 4.7 feet.

The other floods during the year were of a local, rather than a general character. Nevertheless, a number are worthy of mention.

Heavy rains were frequent throughout May over the upper Mississippi Basin and flood stages were a constant threat at this time in Nebraska, Iowa, Kansas and Missouri. Rainfall was generally well distributed during the month and high or unusually high stages were not reached except for the record breaking flood in the Nishnabotna River in southwestern Iowa. This stream reached a stage of 20.5 feet at Red Oak, Iowa, 2.0 feet higher than the previous record there in 1937.

In June heavy rains continued in Iowa and in Indiana. While these rains did not cause excessively high river stages, their continuation resulted in the Des Moines River being above flood stage as many as 40 days during the four months from March to June. The Wabash River in Indiana was above flood stage for 72 days at Hazelton during these four months and over 60 days at a number of other places.

In July the most important flooding was the local overflows of smaller streams which resulted from heavy concentrations of rainfall in the region from Virginia to Maine. These local overflows caused considerable damage. A severe downpour in Rutland County, Vt., on the 20th and a series of cloudbursts over western Berkshire County, Mass., on the 22nd caused considerable damage to highways, bridges, crops and livestock. These floods are of considerable interest because the U.S. Geological Survey reported that Rathbun Brook near Hancock, Mass., with a drainage area of slightly less than 1 square mile, had a discharge of more than 3,200 c.f.s. per square mile. This was reported to be the highest rate of flow on a per square mile basis ever recorded in New England. Albany, N.Y., experienced the wettest July since 1871. Much of the precipitation fell in thunderstorms of cloudburst proportion, and numerous flash floods were reported during the month. The most important was on the 22nd over Rensselaer and Columbia Counties; on this day dry creek beds became raging tor-

rents, lake levels were raised 2 or 3 feet; headwater creeks rose to record heights, washing out bridges, highways, railroads and buildings.

In August severe local floods occurred in West Virginia between Charleston and Montgomery; in the vicinity of Clinton, Iowa; and in the north portion of Salt Lake City, Utah. Considerable damage was caused by each of these local overflows.

In October the greatest flood of record since the completion of the new State Barge Canal system in 1918 occurred in the upper Mohawk River in New York. This rainstorm and flood took place during the first 3 days of the month. Due to the heavy rainfall over this area in the preceding months reservoirs were at high levels prior to the storm and the ground water level was near its maximum; therefore, the percentage of run-off was especially high. While the stages of this year's flood were the highest since regular records have been kept, they were not so high as the stages reached in 1913, 1902 or 1901 or in the memorable year of 1869, in all of which there were floods in the Mohawk River.

For the 12 months ending Sept. 30, 1945, the flow in the Mississippi River at Vicksburg averaged 763,300 c.f.s. which is 135 percent of normal and the greatest in the 15-year record since 1930. (The flood peak at Vicksburg on April 10, 1945, was 1,940,000 c.f.s. and was second only to that of February 1937). The annual flow of the St. Lawrence River below Lake Ontario averaged 246,000 c.f.s. which is 112 percent of normal. The Columbia River near The Dalles, Oregon, averaged 151,100 c.f.s., 76 percent of normal; although greater than the preceding year, 1945 ranks among the lowest of record in the Columbia River.

Meteorological Progress. Radar is affected by weather and notably by precipitation. For this reason radar instruments developed for war purposes may play an important role in the future of observing and forecasting the weather. The use of radar to detect storms began as early as August, 1943.

Much interest has been created in the airplane flights into tropical hurricanes. A number of important papers have been published about these flights and Wexler has constructed a rather complete sketch of the structure of a tropical hurricane from observations made on his flight into the hurricane of September, 1944. His observations were made when this hurricane was located east of Cape Charles, Va. Wexler's sketch shows winds blowing inward and with a slight downward component below the base of the main cloud layer, while above this layer the winds are ascending and blowing outward. At the eye of the storm the winds descend while immediately around the eye the ascending winds are strongest.

Information has been released that fog was dispersed from airfields in England during the war by burning oil. Following long research and experimentation which considered the use of supersonic waves, electrical discharges, absorption of moisture by chemicals, drying by refrigeration and air-conditioning apparatus, the oil burning proved to be successful. It was found that if the temperature of the atmosphere over an airfield could be raised 7° Fahrenheit the fog disappeared in that air. The heat was provided by a continuous line of oil burners installed parallel to, and some distance from, each side of the main runway. Under normal conditions fog can be cleared in ten minutes and about 6,000 gallons of fuel oil for each aircraft landed.

Interest in constant pressure free air maps has

been stimulated. For some years past upper air temperature and humidity observations were plotted on charts at fixed heights above sealevel. On July 1 the Weather Bureau put into use charts where the temperature, humidity and height are plotted for fixed pressure levels. J. R. Fuiks and others have published papers recently on the advantages of the constant pressure over the constant level chart.

The American Meteorological Society appropriately celebrated its twenty-fifth anniversary in 1945.

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RICHMOND T. ZOCH.

METHODIST CHURCH. The Crusade for Christ, the five-fold quadrennial program of advance, adopted by the General Conference of 1944, absorbed the attention of the 41,067 Methodist Churches in the United States during the year. The task, according to the plan, was the raising of \$25,000,000 for post-war relief and reconstruction. Promotion of this, under the leadership of Bishop J. Ralph Magee of Chicago, began in the fall of 1944. During the first three and a half months of 1945 more than \$27,500,000 was pledged by the churches over and above all regular giving. At the year's end 22 million had been collected and distribution was under way. Among gifts made was the presentation in the Greek Embassy in Washington of \$25,000 for the use of Archbishop Damaskinos, Greek regent, in aiding the children of his country. The donation was thought to be of special interest since, crossing interfaith lines, it was obviously humanitarian and not sectarian.

Evangelism is the current emphasis of the Crusade for Christ, the need for which was made apparent by the fact that of 21,104 pastoral charges, 3,360 did not receive, during the last year of record, any new members except by transfer. A goal of a million new members has been set. Effort to make new Christians, and to revive the interest of the million and a quarter inactive and non-resident members, is being carried on through schools of evangelism for pastors and lay workers in all the 33 episcopal areas. The New Life movement, led by the Rev. Dr. Albert E. Day, who resigned the pastorate of First Church, Pasadena, Calif. to assume its leadership, has been an outgrowth of the evangelistic emphasis of this year. It will work through preaching missions and a weekly publication called *New Life*, of which Dr. Day is the editor. General leadership of the evangelistic phase of the Crusade is being given by the denomination's Board of Evangelism at Nashville, Tenn., Dr. Harry Denman, executive secretary.

Bishop Charles C. Sealeman of Dallas was chosen in April as president of the Council of Bishops. In December the Council issued a strong pronouncement against peacetime compulsory military training. In this Bishop Charles Wesley Flint of Washington dissented, putting out a statement approving the policy as a temporary measure.

The Methodist Commission on Chaplains, with

headquarters in Washington, reported, when war ended, that more than 1,650 Methodist ministers had served as chaplains. Of these 132 received 162 decorations for valorous conduct. Twenty-one deaths occurred, nine in action and twelve from illness. It was estimated that of Methodist ministers who could meet the requirements of age, education and physical fitness, at least one in four was in the chaplaincy.

Statistics for the latest twelve-month period for which figures are available show a membership of 8,046,129, an increase of 66,966 over the preceding year. The church has paid a total of \$116,223,876 for all purposes. Included in this is \$42,035,097 for ministerial support; \$26,629,932 for local church expenses; and for regular benevolences, \$15,050,181, an advance of nearly six million. The Women's Society of Christian Service, which enrolls 1,161,389 members, raised \$7,017,113 for home and foreign missionary and other causes. A reduction of indebtedness of a third on churches and parsonages is recorded, \$12,197,248 having been devoted to this purpose. The committee on Overseas Relief, headed by retired Bishop Herbert Welch, New York City, raised and disbursed \$673,296. The Board of Publication this year exceeded all previous records, reporting gross sales of \$8,315,232. Following its long custom, \$400,000 of the produce of the year was allocated to retired ministers. In December Benjamin A. Whitmore of Nashville, Tenn., one of the two publishing agents, resigned after twenty years service.

The only death among the bishops occurred on Jan. 10, 1946, Bishop J. Lloyd Decell of Jackson, Miss. Bishop Brenton T. Badley of Delhi, India, retired and was succeeded by the Rev. John A. Subhan, a Mohammedan convert. The Rev. Arthur A. Wesley, a missionary, was elected Bishop to succeed Bishop Juan Gattinoni in Buenos Aires. Missionary Bishop John M. Springer completed his work in South Africa. In China Bishop Ralph A. Ward, long interned by the Japanese, was released. Bishop F. H. Otto Melle of Berlin reported wide destruction of Methodist property in Germany. Bishop Edwin F. Lee of Singapore has been heading the General Commission on Army and Navy Chaplains in Washington, until his field opens. During the summer he made a flying visitation of chaplains in the Pacific Islands. Bishop G. Bromley Oxnam of New York, as president of the Federal Council of Churches, represented American Protestantism at the enthronement of the Archbishop of Canterbury in April, followed by an official visit of Protestant chaplains in the Mediterranean and Africa-Middle East theaters. In November he was one of three churchmen to visit German church officials. Bishop James C. Baker of Los Angeles, as chairman of the International Missionary Council, served as one of the advisors of the United States delegation at the San Francisco United Nations conference. In the autumn he was one of four churchmen, who, with the approval of President Truman and Gen. MacArthur, visited the Christians of Japan.

The death of Mrs. Henry Pfeiffer of New York City on Jan. 8, 1946, lost to Methodism perhaps its most outstanding benefactor of all time. With her husband, the late Henry Pfeiffer, she gave buildings or substantial contributions of endowment to more than 50 church related colleges on three continents, and contributed to numerous other church philanthropies.

The unification of the three major branches of Methodism in the United States, effected in May 1939, has been completely confirmed, both in the

complete consolidation of its organization and by court decision. Denied the right to use the names of any of the former churches which united, a small die-hard group from the former Methodist Episcopal Church, South, organized this year 22 pastoral charges into the "Southern Methodist Church."

MEXICAN CLAIMS COMMISSION, American. A Commission established pursuant to the provisions of the Settlement of Mexican Claims Act of 1942. Under this Act the Commission adjudicates claims and makes awards to claimants entitled to participate in the distribution of a lump sum settlement recently effected by the Department of State whereby the Republic of Mexico pays \$40,000,000 to the United States in settlement of claims. Participating claims have originated over a long period extending from 1868 to 1940 and include claims relating to the expropriation of lands and mines, confiscation or destruction of personal property, injuries to individuals, and miscellaneous cases of alleged denial of justice. Chairman: Edgar E. Witt.

MEXICO. A North American republic. Area: 758,258 square miles. Population: 21,153,321 (1943). Capital: Mexico, D.F.

Mexico consists largely of a plateau of 8,000 feet average elevation bordered on the east, west, and south by mountains. Coastal lowlands extend along the Gulf of Mexico and the Pacific Ocean, and Yucatán Peninsula in the southeast is a vast lowland plain. Throughout the plateau area of northwestern Mexico and most of Baja California the climate is dry, with temperatures ranging from cool-temperate to hot. The southern part of the plateau region has a temperate dry-winter climate, which merges into tropical in the southeast and Yucatán Peninsula.

Government. Under the Constitution of 1917, Mexico is a federal union of 28 states, 3 territories, and the Federal District. The Congress is bicameral, with a Senate of 58 members and a Chamber of Deputies of 147. Regular sessions begin on Sept. 1 of each year. The President is elected for a 6-year term and may not be reelected. He is aided by a Cabinet of 11 ministers. General Manuel Avila Camacho was elected President on July 7, 1940, and inaugurated on Dec. 1, 1940.

The People. Over half of the total population of Mexico are mestizos; 29 percent are Indians, and 17 percent persons of European descent. Population density is highest in the central highlands, lowest in the north and southeast. The three largest cities are: Mexico, 1,448,422; Guadalajara, 228,049; and Monterrey, 180,942.

Spanish is the official language, but some minority groups speak their native tongue and various Indian languages are spoken in rural areas. Roman Catholicism is the predominant religion.

In 1938, official estimates indicated that 55 percent of the adult population of Mexico was literate. In 1941 there were 23,191 primary schools with a total enrollment of 2,037,870. Excluding students in normal schools, 64,758 students were registered in 388 intermediate schools. Mexico has 13 universities.

National Economy. Mexico's economy is based upon agriculture and mining. Corn is the principal crop and staple food. Other important domestic crops are: beans (second in importance), wheat, sugar, cotton, rice, chickpeas, and fruits. Food crops exported in significant amounts include bananas, coffee, and winter vegetables. Stock raising is also an important industry; recent estimates indicate

that Mexico has 12 million cattle and 5 million hogs. Henequen, produced in Yucatán, is the chief fiber raised, but others are grown in small quantities. Forest products include chicle, wild rubber, copra, and lumber. Production figures for 1944 for leading agricultural crops: corn, 2,440,483 metric tons (est.); rice, 118,409 metric tons of paddy; bananas, 440,465 metric tons. For 1944-45: wheat, about 396,467 metric tons; sugar, 371,630 metric tons; cotton, 495,988 bales.

Minerals constitute a large part of Mexico's exports, and equipment for mines accounts for a good part of its imports of capital goods. Mexico's major mineral product by value is silver; it leads all other countries as an exporter of this metal, and produces 40 percent of world output. Petroleum, lead, and gold are other important minerals, and copper, zinc, mercury, tin, antimony, iron, tungsten, manganese, bismuth, and cadmium are also produced. Crude petroleum production in 1944 amounted to 36,120,000 barrels; refined oil was valued at 337,687,000 pesos. Other mineral production in 1944, (in millions of avoirdupois pounds): zinc, 483.9; lead, 409.5; iron, 297.5; copper, 91.3; manganese, 64.2; antimony, 24.2; silver, 5.1; (in thousands of avoirdupois pounds) molybdenum, 2,640.9; mercury, 1,757.2; tin, 733.9; tungsten, 353.2; bismuth, 365.5; gold, 35.

Manufacturing in Mexico is chiefly confined to consumer goods, with little development in the heavy industries. In the past 2 years, however, Mexico's industrial growth has been phenomenal, and there are now over 28,500 factories employing more than 512,000 persons. The cotton textile industry has recently reached major proportions as a national industry. It includes some 200 mills with a capital investment of about 150,000,000 pesos. Sales value of production in 1944 amounted to 480,000,000 pesos. Silk and rayon textiles are also made. Processing of foods is an important industry, and in addition, such articles as cigarettes, leather goods, cement, paper, and glassware are manufactured.

Foreign Trade. Mexican exports in 1943 were valued at 1,127,457,000 pesos. Commerce during the war years was almost exclusively confined to the U. S., imports and exports to that country both reaching 85 percent of the total value in 1944. Merchandise exports to the U. S. in 1944 amounted to \$204,000,000, a 6 percent gain over 1943. Major exports consist of raw materials, principally metals. Other exports in 1944: bananas, 5,812,129 stems; cotton, nearly 30,000 metric tons, and 4,000 tons of lint; cattle, 290,000 heads; henequen, 87,000 metric tons.

Mexican imports in 1943 were valued at 910,030,000 pesos. In 1944 Mexican imports from the U. S. reached \$264,000,000, an increase of 42 percent over 1943. The value of imports of agricultural, mining, and industrial machinery increased from 67,000,000 pesos in 1940 to 143,000,000 pesos in 1944, more than 100 percent. Imports consist chiefly of manufactured and semi-manufactured goods, and foodstuffs.

Events, 1945. President Manuel Avila Camacho told Mexico, in his New Year's message, of plans to improve the country's economic, industrial, and social structures. The major campaign was against illiteracy, he said.

But the first problem the Government faced was a scandal in which hundreds desiring to work in the U. S. were charged for fraudulent documents. The Attorney General began an investigation of the transactions, in which various deputies were said to be involved. A criminal court judge ordered

detention of three accused deputies and sought a special session of Congress to remove their parliamentary immunity. This was done, and the three men were arrested on Feb. 12.

In the spring, political activity began in preparation for the 1946 Presidential elections. Early in May President Avila Camacho declared that the nation would be completely free to choose his successor, the only restriction being that the next President must continue to abide by the Constitution. Later that month, as a result of reports that some churchmen were taking an active interest in the campaign, Archbishop Luis M. Martínez ordered the clergy to abstain from participation in political activities.

Shortly before this, after a meeting of a thousand regional *jefes* (chiefs) of the rightist, nationalistic Sinarquista movement, leaders announced officially that they were openly resuming their activities (the Sinarquista newspaper had been suppressed and meetings forbidden the previous summer). The organization announced it would aim at "implantation of the Christian social order" and the "salvation of Mexico," but emphasized that "Sinarquismo is not governed by the Church, whose aims are higher and more elevated."

The annual rally of the Sinarquistas was held at León, Guanajuato, on May 19-20. The former Supreme Chief, Manuel Torres Bueno, resigned and was replaced by Gildardo González Sánchez. He pledged himself to heal the split which had disrupted the organization in 1944, but a leader of the extremist minority which had broken away branded his election as "spurious." Sinarquista leaders denied any responsibility for a series of anti-Protestant outbreaks in centers where their movement was strong. On Aug. 27, the National Sinarquist Union, announced that it "is not a political party and will not participate in the coming elections as one."

On June 5 Interior Minister Miguel Alemán resigned to seek the presidential nomination of the official Party of the Mexican Revolution (PRM), the only organized national party in Mexico. Two days later the Confederation of Mexican Workers (CTM) endorsed his candidacy, and the later concurrence of other groups within the PRM made his eventual nomination as the government candidate almost inevitable. In accepting the CTM's endorsement, Alemán stated that inflation was Mexico's greatest problem. He defended freedom for private enterprise and "legitimate profits" for foreign capital. Labor leader Vicente Lombardo Toledano, who introduced Alemán, outlined a "new strategy for labor in the postwar period," consisting of association with enlightened bourgeois and progressive forces against "powerful monopolies in the victor countries that now may wish to capitalize on the allied victory." Lombardo's position as head of the Latin American Labor Federation (CTAL) gave this program its significance. Mexico City Mayor Javier Rojo Gómez and General Miguel Henríquez Guzmán, who had been campaigning for the presidency, withdrew from the race when the CTM backed Alemán; Primo Villa Michel was named Interior Minister to replace Alemán.

At the beginning of July President Camacho outlined a program of complete army reorganization designed to modernize all army branches and to prevent military men from entering politics. He also announced that nearly 600 generals and 800 colonels on inactive duty would be retired on pensions to make room for young men with modern training.

Defending himself against charges that his for-

eign policy was too subservient to that of the U. S., Foreign Minister Ezequiel Padilla resigned on July 11; on Sept. 1, he was replaced by Francisco Castillo Nájera, Ambassador in the U. S.

On Aug. 28, the President accepted the resignation of former President Lázaro Cárdenas, who had been War Secretary since the summer of 1942.

President Camacho, in his fifth annual message to a joint session of Congress, opening on Sept. 1, asked for "a moral understanding among nations of the world" to guarantee humanity the freedoms for which it fought. He predicted increasingly closer relations between Mexico and the U. S., and reaffirmed Mexico's traditional friendship for the Spanish people and the Spanish republican Government-in-exile. Mexico's two main tasks, the President said, were industrialization and education, and he promised free elections for the choice of his successor in July, 1946.

Two days later Padilla announced he would be a candidate for President, if "the people want me." In a scathing indictment of the present regime, he urged the President to forbid governors and municipal and government officials to participate in propaganda campaigns for presidential candidates, to enact an electoral law that would ensure freedom of voting, and to restrain the PRM from using the army as a means to muzzle "the aspirations of the people."

The seventh annual convention of the Catholic party, Nationalist Unification Movement, voted on Sept. 23 to take an active part in the campaign, and the rightist National Action Party opened fire on the administration for its alleged failure to solve educational and economic problems. In October, the National Central Revolutionary Party was formed to back General Guzmán, whose campaign had continued despite his professed withdrawal.

The first bloodshed of the campaign took place on the first Sunday in November, when several Padilla supporters were reported injured in a street fight near the candidate's Mexico City home.

In a speech accepting the nomination of the newly formed Democratic Party, on Nov. 25, Padilla denounced the Mexican elections system as undemocratic and accused the PRM of using government funds to finance the campaign of Alemán. He declared that if elected he would work to end government monopolies and encourage private industry. "Totalitarian, oppressive, and sovietizing forces" were at work in Mexico, he charged. The Alemán trade unions countered by calling Padilla the U. S. supported candidate. The labor paper, *El Popular*, also charged that Padilla had the backing of the Catholic Church, which, it said, "operates as a political party under the direction of the Vatican."

The last entry in the presidential race was General Enrique Calderón, supported by the Popular Redemption Party, who opened his campaign in December.

The President announced late in November that he would soon present to Congress a bill creating a nonpartisan electoral council to supervise election polls. He urged the parties "not to fight" and declared that he was "personally completely disinterested" in the election results, but was "determined to maintain the principle of national unity with moral, and if necessary, material force." Padilla's party criticized the President's proposals as inadequate to meet their complaint that the electoral machinery permitted the government party to control the voting.

The campaign was becoming more intense as the year ended. Three were reported dead and

86 wounded on Dec. 23 in a series of clashes at Cuernavaca and nearby towns between Alemanistas and Padillistas.

Economic Developments. Economically, 1945 was troublesome but hopeful for Mexico. Inflation continued to be the main problem: The Bank of Mexico's cost-of-living index showed a 300 percent increase over the 1934 level. As a result, the country was plagued by strikes throughout the year, complicated by crop losses from natural causes, and wartime shortages of consumer goods.

On Jan. 12, Petróleos Mexicanos (PEMEX), the government oil monopoly, announced that its 1945 budget of \$87,000,000 was \$9,000,000 higher than the 1944 budget. Proposed production of 46,254,000 barrels of crude oil was 10 million barrels more than the preceding year's production. For the first time, it was said, payments to U. S. companies for their expropriated properties would come from profits. The Mexican Embassy in Washington on Oct. 2 presented to the Department of State a check for \$4,085,327, representing the second installment on the oil-expropriation debt.

On Apr. 8, labor leaders and representatives of industry signed a pact in which they agreed to cooperate in the postwar period "to realize Mexico's industrial revolution," and smooth the transition to the industrialization of the country.

A two-year extension, effective July 1, of the Mexican-U. S. currency stabilization agreement, was signed in Washington on June 13.

On the following day, Mexican exports to Europe were resumed, when a cargo left for Switzerland. A Mexican economic mission returned from Europe on July 4. It reported that it had accomplished important studies of products that Mexico could buy and sell, as well as plans for air and maritime transportation. It was expected that petroleum would be one of the first products to be shipped to Europe.

On Sept. 13, the Finance Ministry issued a list of products for which import licenses would be required. This was assailed by both Mexican and U. S. businessmen as a step toward artificial protection of Mexican industries.

Late in September, the U. S. Government raised the price it would pay for foreign silver. This caused the Bank of Mexico to suspend all sales of silver coins to the public, and a number of Mexican-owned marginal mines prepared to resume operations.

On Oct. 9, Kuhn, Loeb and Co. announced the rapid public over-subscription of 197,500 shares at \$23 each of Industria Eléctrica de México. This was the New York Stock Exchange's first major foreign industrial issue since the beginning of the war. Two days later, Mexican Finance Minister Eduardo Suárez predicted that listing of Mexican securities on the New York exchange would soon become a general practice.

On Dec. 28 the Chamber of Deputies received for study a record high 1946 budget of approximately \$243,000,000, of which \$31,000,000 was allocated for debt service, \$63,500,000 for national defense, \$42,000,000 for education, \$11,500,000 for public health, and \$1,100,000 for labor.

Declaring that Mexico's peacetime economy would differ greatly from that of wartime, the National Chamber of Commerce in August asked for intensified agricultural and industrial output. And in the same month Finance Minister Suárez said that he believed Mexico would survive postwar economic readjustments in good order. "There will always be a heavy world demand for silver and most other metals," he declared, adding that the

peso would be maintained at its present value, and that "we plan to continue our public works program during the postwar period, and the emphasis will be on highways, railroads, ports, and irrigation."

Foreign Relations. Mexico became the second Latin American country to participate actively in the war when the 201st Aviation Squadron, numbering approximately 300 men, sailed for the Pacific war zone on Apr. 8. It saw its first action on June 11, in a raid on Luzon, and was received by 200,000 cheering Mexicans when it returned home on Nov. 19.

It was announced on Nov. 4, that Mexico had been elected a member of the administrative council of the International Labor Organization.

Relations with U. S. A check for \$448,000, delivered on Jan. 2, completed payment of installments on bloc settlement of U. S. damage claims incurred during the Mexican revolution; total payments amounted to \$5,448,000.

In a joint report issued by Presidents Avila Camacho and Roosevelt on Jan. 28, the Mexican-U. S. Commission for Economic Cooperation was declared dissolved. President Roosevelt praised the achievements of the Commission, established 16 months before to aid Mexico in supplying essential war materials. The report reviewed the commission's projects and predicted large-scale developments of "major significance" in the next few years, during which Mexico plans to spend \$383,000,000 on industrial development programs. These would require at least \$94,000,000 of foreign capital equipment during the next two years and another \$43,000,000 in 1938. Despite the war, Roosevelt said, the U. S. delivered to Mexico more products for its consumption and the maintenance of its economy in 1943-44 than in any previous two-year period.

On Apr. 18, the U. S. Senate ratified the Mexican-U. S. water treaty by a vote of 76-10. The Mexican Senate took the same action in the fall, and the treaty was signed in Washington on Nov. 8. It covered allocation of the waters of three great international rivers: the Rio Grande (Rio Bravo), which separates Mexico and the U. S.; and the Colorado and Tiajuana rivers, which flow from the U. S. south into Mexico.

The treaty had been debated long and hotly in the Senate Foreign Relations Committee and on the floor of the Senate. Opponents had charged that it guaranteed Mexico too much water, removed control of the Colorado River from States whose agriculture is dependent on it, and was generally ambiguous and likely to lead to misunderstandings. There were also objections in the Mexican Senate.

On Dec. 17, U. S. Ambassador George Messersmith inquired of the Mexican Foreign Secretariat if there was any "definite evidence" to support charges made by labor leader Lombardo Toledano that "certain U. S. firms" had smuggled weapons to the rightist Sinarquista Union for the purpose of fomenting an armed rebellion designed to put in power a pro-U. S. quisling as President of Mexico. Lombardo made it clear that he was referring to Padilla. The Mexican Government disavowed the charges and stated that Lombardo had failed to substantiate them.

Relations with Other Countries. Soviet Ambassador Constantin Oumansky, his wife, and several members of his staff were killed on Jan. 24 when a Mexican air-force plane crashed and burned immediately after taking off on a scheduled flight to Costa Rica, where Oumansky was to present his credentials as Minister. On Oct. 7 an official report

placed responsibility for the accident on a pilot's error and reported no evidence of sabotage.

Mexico recognized the Spanish republican Government-in-exile on Aug. 27.

HARRY B. MURKLAND.

MIDWAY ISLANDS. A group of islets located in the Pacific, 1,804 statute miles northwest of Honolulu. Although Midway was discovered by Captain N. C. Brooks in 1859 and known as Brooks Island, the name was later changed because of the position of these islands in the mid-Pacific, i.e. 2,800 miles from California and 2,200 miles from Japan. It was formally declared a United States possession on Aug. 28, 1867, by Captain Reynolds of the U.S.S. *Lackawanna* who made a survey of the islands.

The U.S. Navy Department has had complete jurisdiction over them since July 4, 1903. The total land area of all the islets is approximately 28 square miles. Sand Island is one and a half miles long and one mile wide, consisting of 850 acres, and serves as an important cable relay station of the Commercial Pacific Cable Company in the service between San Francisco and Shanghai. Eastern Island is somewhat smaller than Sand and contains only 328 acres. Midway Islands have been used as a naval air station and as an air depot between Nov. 24, 1935, and Dec. 7, 1941, by Pan American Airways on their transpacific route between San Francisco and Manila. The population of Midway has always been small, in 1940, it was 437.

Events, 1945. In testimony presented before the Pearl Harbor Investigating Committee in December, Captain Toshikazu Chima, former Japanese Chief of Naval Operations, was quoted as saying "The Midway defeat changed the course of the war."

CHARLES F. REID.

MILBANK MEMORIAL FUND. A Fund established in 1905, with assets of \$9,176,407.29 at the end of 1944. Appropriations for grants and projects in that year totalled \$237,702.00. The scope of the Fund, while widely diversified, has been principally in the field of public health. At present its special interests in this field are nutrition, housing, population trends, and the appraisal of public health methods and procedures. In 1944 twenty-four organizations received funds. President: Albert G. Milbank. Executive Director: Frank G. Boudreau, M.D. Offices: 40 Wall Street, New York City.

MILITARY PROGRESS. The cessation of hostilities in the greatest war in history resulted in revelation of military weapons heretofore kept secret. Some of these, particularly in the guided missile category, together with the atomic bomb, have brought great changes in military thinking and planning. Yet military authorities generally believe that the new scientific weapons have not made the fighting ground soldier any less necessary to war and military defense. Rather, they contend, he becomes increasingly important as a means by which the enemy's source of lethal weapons and his bases of operations may be seized. General of the Army George C. Marshall, U.S.A., in his report as Chief of Staff, cites the men necessary to deliver the first atomic bomb on Hiroshima.

"First," Gen. Marshall said, "we had to have the base in the Marianas from which the plane took off. This required preliminary operations across the vast Pacific, thousands of ships, millions of tons of supply, the heroic efforts of hundreds of thousands of men. Further, we needed

the B-29's and their fighter escort which gave us control of the air over Japan. This was the result of thousands of hours of training and preparation in the United States, and the energies of hundreds of thousands of men.

"The effect of technology on the military structure is identical to its effect on the national economy. Just as the automobile replaced the horse and made work for millions of Americans, the atomic explosives will require the services of millions of men if we are compelled to employ them in fighting our battles."

The redeployment of forces from Europe to the Far East following the collapse of Germany, and the subsequent demobilization procedure after the surrender of Japan brought military problems which, while not new, surpassed in scope and magnitude any similar ones in history.

Guns. In the new recoilless rifles developed by the Ordnance Department of the U.S. Army, the striking power of field artillery has been put into the hands of the infantry soldier. The American development was considered to be an improvement over the recoilless 75-mm brought out early in the war by the Germans for the use of their parachute troops. The first two U.S. models, the 57-mm and the 75-mm recoilless rifles, were produced in time to be tested in action both in Europe and in the Pacific. The 57-mm model is small and light enough to be operated as a shoulder weapon, while the 75-mm fires from a standard machine-gun tripod.

Although they resemble rocket weapons, the new guns use conventional artillery shells. The recoil of artillery is avoided by permitting a controlled portion of the propellant gases to escape through openings in the breech. The amount of pressure permitted to escape through the rear exactly counter-balances the force required to propel the shell through the rifled tube. Because of the loss of pressure through the breech openings these weapons do not have the range of conventional artillery. Nevertheless, within their range they are highly accurate.

The 57-mm rifle weighs only forty-five pounds, is sixty-one inches long, and fires a high-explosive shell weighing nearly three pounds a distance of two miles. The 75-mm rifle weighs 110 pounds, is eighty-two inches long, and fires a fourteen-pound shell more than four miles. Besides being used as a shoulder weapon, the 57-mm may be fired from a small bipod with the gunner lying prone. A two-man team handles each of the weapons. Their light weight adapts them particularly to the use of airborne troops. The 17th Airborne Division used them in an operation across the Rhine River in March, 1945.

Other new American weapons included a 105-mm anti-aircraft gun weighing 46,000 pounds and with a range of 46,000 feet. The U.S. Army's largest mobile anti-aircraft gun, its fire can be controlled manually or by the T38 anti-aircraft director.

Also in the anti-aircraft field, the U.S. Army developed an electronically operated locator for keeping anti-aircraft searchlights automatically trained on enemy planes.

A new 155-mm "Long Tom" gun was developed and mounted on an M4 tank chassis. It fires a 95-pound shell up to 25,000 yards. Mounted on the M4 chassis is a new eight-inch 41-ton howitzer with a range of 18,500 yards.

The U.S. Army also produced a 10-inch mortar capable of firing a shell every two minutes at a range of five miles.

Another development was a modification of the semi-automatic carbine to permit fully automatic firing. In the converted carbine full automatic fire at the rate of 750 rounds per minute may be delivered by a trip of the selector. By reverse movement of the selector, semi-automatic fire is restored. The new action, accomplished by a slight alteration of the basic mechanism and the addition of a few new parts, adds only two ounces to the weight of the weapon. It proved particularly effective in the house-to-house fighting along the Rhine.

An effective weapon was produced by the British Army in their new 7.2 howitzer, operated by heavy batteries of the Royal Artillery. The weapon weighs ten tons and fires a 200-pound shell up to 16,000 yards. The howitzer is mounted on a carriage fitted with pneumatic tires five feet six inches in diameter. The recoil of the weapon is controlled by hand-operated brakes and ramps, placed behind the wheels when the gun is in action.

A novel gun produced by the Germans, too late for effective use, was a curved-barrel machine carbine capable of shooting around corners. With it a rifleman could fire from behind a wall, corners of houses, out of windows, or from any such concealed and protected position. The bullet travels along the straight portion of the barrel propelled by a small charge, but as it hits the curved portion escape ports release some of the back pressure reducing its velocity as it swings through the curve. Particularly ingenious is the mirrored-periscope sight with a prismatic corrector which permits the rifleman to sight his odd weapon.

Little is known of the Soviet Union's new artillery weapons, employed so effectively on the Eastern Front. Writing from Moscow and describing the May Day parade, C. L. Sulzberger of the *New York Times* tells of "gigantic two-section, tractor-drawn howitzers and mortars, which as far as the eye could estimate, exceeded in size even those rumored 360-mm pieces the Soviet Union is said to possess." Mr. Sulzberger said:

"The enormous mortars or howitzers displayed today are certainly larger than the famous German 'Satan.' They easily surpassed in muzzle span the tremendous rifles, mounted on their own caterpillars and hauled by giant tractors, that preceded them in the procession. The howitzers made the heavy siege guns look diminutive and transcended in size the other vast, squat twin-section howitzers also in the parade, which may themselves well be the long-rumored 360-mm Red Army secret gun."

Tanks. Flotation devices for tanks, not revealed until after the war, played important parts in landings both in Europe and the Pacific. The first, developed by the British, was known as the DD swimming device and was used to land British and American tanks in the invasions of Southern France and Normandy. It was a boat-like canvas structure, fitted above the tank tracks, enabling medium tanks to swim to land from distances up to four or five miles at sea. Because the canvas came high up the sides of the tank, its primary armament could not be used during the water trip, but as the tank came up the beach and out of the water the sack was deflated, freeing the guns for action. Because of their low silhouettes, the tanks made poor targets in the water. However, many were lost in rough weather by water washing over the tops of the canvas sacks. Some, too, stalled in the sand on landing.

Subsequently a new flotation device for medium tanks was developed and successfully employed in the invasion of Okinawa and other Pacific islands. Known as the M-19, it consisted of metal cans

fastened to the front, rear and sides of the vehicle. The cans were filled with plastic foam material weighing less than two pounds per cubic foot. Because of the cellular construction of the filler, the cans retained their flotation qualities even when pierced by gun fire. In addition the tanks were equipped with bilge pumps to withdraw water entering through leakage or wave action. A similar device was developed for heavy tanks but was not put into quantity production because of the end of hostilities.

The Japanese brought a new type of amphibious tank into use in the Philippine campaign. Pontoons were built to attach to the front and rear of the tanks, which were driven in the water by a pair of propellers mounted between the tracks in the rear. The rear pontoon was equipped with a rudder.

The British developed and used several types of tanks to carry and lay bridges over which they, and following vehicles, could cross wide ditches or craters. The bridge-laying mechanism is operated automatically by controls from within the tank. These bridges can span widths up to thirty feet or pass over walls about ten feet high. The various types include the "Scissors" bridge, a folding span carried on top of a Valentine tank. The bridge is laid by being automatically unfolded and lowered by a mechanism operated from inside the tank. Another, the Churchill bridge-layer, consists of a 30-foot span of steel trackway, raised by an arm on the tank hull, carried forward and lowered across the gap in front of the tank.

Both the British and the Germans made use of tanks as anti-aircraft vehicles. The German "flak wagon," used during the Ardennes drive, consisted of a revolving turret mounted on a tank chassis. The armored turret was equipped with four machine guns firing in pairs. The British anti-aircraft tank employed a Crusader chassis and mounted twin Oerlikon anti-aircraft guns. A similar chassis mounted a 40-mm Bofors anti-aircraft gun.

As an improvement over their Tiger tank, the Germans brought out a new model, the Royal Tiger, first reported in December, 1944, against the French in Alsace. Most of the Royal Tigers carried an improved version of the 88-mm gun, while some models mounted a 105-mm gun. A power-operated turret replaced the hand-operated one of the earlier version. The frontal armament was increased to a thickness of twelve inches. Greater flotation over bad terrain was provided by much wider tracks than previously used. A low silhouette made it a difficult target in the field.

At Oberembt, Germany, an infantry battalion of the XIX Corps of the U.S. Ninth Army captured from the Germans a huge 380-mm mortar, or howitzer, mounted on a chassis of the new Royal Tiger tank. The mortar barrel was seven feet long and rifled. The shell itself weighed 770 pounds, was five feet long and fifteen inches in diameter. The shells, of which the tank carried twelve, were loaded into the tank by a crane and into the breech of the mortar by a hoist built into the tank. The shell was propelled by an internally carried charge, which gave it a range of about 5,000 to 6,000 yards. The tank also carried a .34 caliber machine gun and a grenade launcher. The turret was not movable.

The British provided heavier armament on many of their tanks by replacing their three-inch howitzer with a 95-mm howitzer firing a shell of high capacity filled either with high explosive or smoke. The high trajectory of the howitzer made it possible to "lob" shells over buildings or hills at tar-

gets out of the direct sight of the tank gunner.

The latest U.S. Army tank was the heavy M-26, a 43-ton vehicle armed with a 90-mm gun, two .30 caliber machine guns, and one .50 caliber machine gun. This tank, named the General Pershing, is powered with a 500-horsepower, V-8, liquid-cooled gasoline engine, which gives it a highway speed of twenty-five miles per hour. The frontal armor is four inches thick, but the angle at which it is placed affords an actual head-on thickness of 6.9 inches.

Balloon Bombs. A novel Japanese development was the bomb-carrying pilotless balloons which utilized the west to east air currents to fly from Japan to North America. These had been in use for some time and many had landed in the United States, but information concerning them was withheld by censorship to prevent leakage of data to Japan which might aid in improving their accuracy or damage-creating capacity.

These balloons, about 34 feet in diameter, were made of five layers of oiled paper inflated with hydrogen which carried them to altitudes of between 25,000 and 35,000 feet. As they lost altitude from leakage, barometric pressure switches operated to drop sandbags causing them to rise again. When they reached North America (in about 80 to 120 hours) similar switches operated to drop explosive and incendiary bombs as they passed over the country. The last switch operated to destroy the balloon itself.

About 10,000 were launched, their release often being accompanied by ceremonies and speeches at which bonds were sold. Some damage was done in this country and a few lives lost, but on the whole they were ineffective. After the war, Staff Officers in the Technical Section, Japanese Headquarters, stated that the idea was abandoned on April 20, 1945, because the device had failed both as a morale booster for the Japanese people and as a scare weapon for the Americans.

Radar. Although every one of the major warring powers possessed at the outbreak of the war some form of radio direction finding and ranging apparatus (originally called radar in the United States and radiolocation in Great Britain), it was not until Aug. 14, just after the Japanese had signified their desire to surrender, that the Allies released for publication detailed information, as to its operation and use. In 1943 a general statement had been released, but even discussion of that was subsequently placed under censorship.

The German radar was said to be skilfully designed and rather efficient, but apparently continued and intensive research by the Allies found ways of outwitting and surpassing it. The Japanese model seems to have been of the most elemental type, so far behind those of the other powers as to be almost useless.

The first operational radar system to have been installed is claimed by the British whose Air Ministry decided in December 1935 to establish a chain of five stations on the east coast of England. Since that time the whole coastline of Great Britain has been ringed with radar stations keeping continuous watch for hostile approach. To this radar system the British give a large share of the credit for defense against the German aerial blitz.

While beginning as a detection device, giving the direction, distance, and altitude of airplanes, the uses of radar in offensive and defensive warfare grew to great proportions. In the Navy it was used not only to locate and detect enemy vessels but also to lay their guns on the target even though darkness or haze prevent seeing the enemy. Also

through radar detection of shell splashes in the water, fire could be corrected to a high degree of accuracy. Radar played an important part in the Battle of the Atlantic by locating German submarines which came to the surface at night. In naval warfare radar played its part as early as the Battle of Cape Matapan in March 1941, and subsequently in the Scharnhorst and Bismarck actions. The United States Navy made highly effective use of it, particularly at the Battle for Leyte Gulf (Second Battle of the Philippine Sea), when numbers of Japanese vessels were located and sunk at night by radar directed fire.

Similar fire by coast guns in Britain sank eleven out of eighteen German ships at twenty-mile range in the dark. Artillery radar also may be used to locate tanks at night.

To the air forces radar became so important that B-29 pilots often referred to their planes as "flying radar sets," for on them were radar devices to assist in long range navigation (Loran); identification of fighter support, identification of friendly aircraft, blind bombing apparatus, identification of ships, altimeters, beacon navigation, and for replies to ground interrogation.

Another radar device guides bombing or troop carrier planes to their destination, even advising them when they are over their target or dropping area.

A valuable adaption is the "tail warning set" by means of which the pilot of a single seater fighter plane is given warning of the approach of another plane by means of both a bell and a signal light. This set weighs only 15 pounds.

The "IFF," "Identification, Friend, or Foe," set operates in a system with ground interrogator sending out impulses, and plane set sending back reply. Interrogator sets are also installed in planes. As the set used in the plane is triggered by another set, it actually is not pure radar. This equipment weighs about 39 pounds.

The radar altimeter measures the distance to the ground directly below the plane.

BTO, or "Bombing Through Overcast," has been termed one of the greatest single contributions to strategic bombing. By its means ground targets may be picked up and bombs directed even though the crew cannot see the ground by visual means. Early sets had 40 controls, but later models, used by the B-29's, have only 18.

The Atomic Bomb. The most remarkable military weapon to come out of this war, and the most destructive ever employed, is the atomic bomb, developed and produced in the United States after four years of research at a cost of more than \$2,000,000,000, by a group of scientists principally American and British but including a number from other nations.

The first atomic bomb used against an enemy was dropped from a U.S. Army B-29 bomber over the Japanese city of Hiroshima on Aug. 5. The second was used against Nagasaki on Aug. 9. On Aug. 10 the Japanese submitted their offer to surrender, making mention of the new and terrible weapon being used against them.

The atomic bomb as first used had more power than 20,000 tons of TNT and more than 2,000 times the blast power of the British "Grand Slam"—the largest bomb previously used in warfare. The destruction wrought upon the cities of Hiroshima and Nagasaki was very nearly complete, with terrific loss of life, many dying later from wounds and burns inflicted by the single bomb burst. On Dec. 30, Shichiro Kihara, mayor of Hiroshima, reported that of the pre-bombing popula-

tion of 310,000, a total of 139,000 was dead. This included 58,267 killed outright and those who died subsequently from wounds, burns, or shock. About 500 persons were still in city hospitals. Homes destroyed or damaged totalled 39,809. An area about two and a half miles in diameter was almost completely flattened.

Inevitably, a demand arose for regulation of the military use of this new and destructive power. In November Prime Minister Attlee of the United Kingdom and Prime Minister King of Canada, met in Washington with President Truman to discuss the problem. In an "Agreed Declaration" made public at the close of their talks they referred to the atomic bomb as a means of destruction "against which there can be no adequate military defense" and signified their intention not to release their special information to other nations until safeguards have been worked out.

"We are not convinced," the three leaders said, "that the spreading of the specialized information regarding the practical application of atomic energy, before it is possible to devise effective, reciprocal, and enforceable safeguards acceptable to all nations, would contribute to a constructive solution of the problem of the atomic bomb. On the contrary we think it might have the opposite effect. We are, however, prepared to share, on a reciprocal basis with others of the United Nations, detailed information concerning the practical industrial application of atomic energy just as soon as effective enforceable safeguards against its use for destructive purposes can be devised."

They then recommended that a Commission be set up under the United Nations Organization to make specific proposals:

- (a) For extending between all nations the exchange of basic scientific information for peaceful ends,
- (b) For control of atomic energy to the extent necessary to ensure its use only for peaceful purposes,
- (c) For the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction,
- (d) For effective safeguards by way of inspection and other means to protect complying states against the hazards of violations and evasions

Meanwhile, additional atomic bombs have been produced in the huge and expensive plants built under the "Manhattan Engineer District" of the Corps of Engineers of the U. S. Army which, directed by Maj. Gen. Leslie R. Groves, U.S.A. had charge of the entire atomic bomb project.

Rockets and Guided Missiles. Startling progress has been made in rockets and guided missiles, much of which doubtless is still in the secret category. Rockets continued to be used more and more effectively on all fronts. Multiple mobile mounts increased in use both on land and at sea. The Germans used a number of versions. The "Nebelwerfer," a six barrel projector firing 75-pound rockets with war heads of five and a half pounds of TNT, was employed against the Third United States Army at ranges of one to three miles. The "Wurfkoerper" was a little larger projector. A long range rocket carried projectiles about 25 miles.

A particularly effective use of the rocket principle was the bomb devised by the British Admiralty and Ministry of Supply. Dropped from B-17's, these rocket-propelled bombs struck concrete shelters, submarine pens, underground factories, etc., with velocity sufficient to penetrate very thick concrete walls and explode on the inside.

Guided missiles of many categories were put into use. Some are operated by internal combustion engines, others by reaction engines, some by rockets; some are guided by mechanical devices, some by

electronics, some by radio. All carry destruction and have even greater potentialities in the future. Officials talk of devices which will automatically guide themselves to sources of heat, to light, to concentrations of metal, etc., thus being capable of automatically hitting factories, airplanes, or other selected targets.

Gen. H. H. Arnold, U.S.A., Commanding General Army Air Forces, speaking of "observable trends" in August, said:

"One—manned or pilotless aircraft travelling at supersonic speeds. With such speeds aerial combat as we know it—fighters seeking out other fighters or bombers, and exchanging gun fire in an attempt to shoot each other down—will disappear.

"Two—the extraordinary development of guided missiles and the refinement of their controls so that exact hits can be made on targets of a mile square or less, at any part of the world, from any part of the world.

"Three—improved atomic bombs. They will be destructive beyond the wildest nightmares of the imagination—a weapon ideally suited to sudden unannounced attacks in which a country's major cities might be destroyed overnight by an ostensibly friendly power.

"Four—great developments in the field of defense both against aircraft and against guided missiles by means of target-seeking antiaircraft missiles of rocket or other type. It will undoubtedly continue to be true that every new weapon of offense will eventually be countered by an at least partly effective means of defense. Against the supersonic planes and the highly developed guided missiles of the future it is probable that a defense in the form of missiles automatically seeking out those planes and missiles and destroying them or some of them, in the air, or the stratosphere, or the ionosphere, will be developed.

"Five—perfected communications systems between air and ground making possible the most intricate maneuvers either by piloted planes or pilotless missiles.

"Six—an extraordinary development of the techniques of launching, landing and supplying airborne forces who can be dropped completely equipped at any point in the world is a matter of hours."

"None of these things is visionary, or merely possible," General Arnold said, "They are probable to the point, almost, of inevitability. If we have another war—if another aggressor arises to strike the peace-loving nations—it will be with things like these that he strikes."

Proximity Fuze. A most remarkable device and one that was most closely guarded was the VT or Proximity Fuze, which automatically explodes a projectile as soon as it comes close enough to its target to inflict damage. The VT fuze was developed by scientists of the Office of Scientific Research and Development at the request of the Navy Bureau of Ordnance. The research program was carried on in facilities provided by the Carnegie Institution of Washington and Johns Hopkins University.

The fuze is a very small, but rugged, five-tube radio sending and receiving station, fitted into the nose of a projectile. A vacuum tube sends out electro-magnetic waves which are reflected back by any target that gives a radio reflection, such as metal objects, water or earth. Thus, if a VT-fuzed projectile passes within 70 feet of an airplane, reflected impulses act on the fuze circuit to trigger a switch detonating the main explosive charge.

The Navy protected the VT with elaborate secrecy. On the fighting fronts, great care was taken to keep "duds" from enemy hands. Except for the limited use of the device during Britain's battle against the buzz-bomb, the Combined Chiefs of Staff declined to permit the fuze to be used on land until October 25, 1944. Prior to that time the Navy even avoided firing VT-fuzed shells near islands of the Pacific.

The fuze was particularly successful against Japanese Kamikaze, or suicide, planes and against the German buzz-bombs. During the German drive in the Ardennes it was used in land artillery against ground troops. By exploding over the heads of groups of advancing troops, the weapon was considerably more effective than shells fuzed to explode on contact with the ground.

Engineering. Always important, the role of the engineer in World War II exceeded that in any previous conflict. Col. Alejandro Melchor, Philippine Military Adviser, reported that "There were more engineers in the invasion of Leyte than infantry or troops of any other branch of the service."

The Channel pipeline laid by British engineers in cooperation with the British Navy, was known as operation Pluto. From Aug. 12, 1944, to May 8, 1945, it delivered 120,000,000 gallons of gasoline to the Allied armies in Europe. Flexible pipe was used, it being laid full of water to prevent kinking. Twenty lines were stretched across the channel. The actual laying was accomplished by a force of vessels ranging from 10,000 ton ships to barges and motorboats. The U.S. Army and Navy were working on a similar project using steel pipe, but this was dropped to avoid duplication.

The pipeline to China, authorized by the Quebec Conference, was built by U.S. Army engineers in two sections, one the ABC (Assam-Burma-China) Section and the other from Calcutta. The joining of the two permitted the pumping of fuel directly from the tanker docks at Calcutta to Kunming, in China. Jungles, monsoons, and disease took their tolls, but work went forward steadily in the face of difficulties. At times the construction was carried on just behind the battle lines.

Other important pipelines included that laid from French invasion coast to United States forward areas on the Western Front. This line carried as much as 3,800,000 gallons of fuel a day. Also announced during the year was a double oil pipeline across the Isthmus of Panama.

Particular progress was made in the development of mobile and floating power plants. In Russia much reliance was placed in electric power trains. A Soviet bulletin reported that these trains "invariably follow in the wake of the advancing Red Army. Since the first days of the offensive, mobile stations have traveled to the front with the armored trains and have rendered invaluable service to tank and truck repair shops, supplying them with power." American built power trains were of 1000-kilowatt units and some of 3,000 kilowatts, the latter being a train of nine specially built railroad cars which can be hauled at fast-freight speed and put into service within about eight hours after arrival.

Largest of the U.S. Army's floating power plants was the "Inductance," which, while it was kept busy in the United States, was capable of being moved to any point accessible to water transportation. This plant was built into a steel hull 318 feet long and 50 feet wide, with a maximum draft of 14 feet. Power is generated at 13,800 volts by a 30,000 kilowatt alternator driven by a 19-stage steam turbine.

U.S. Army Engineers built 433 railroad and 231 highway bridges and rehabilitated 14,357 miles of railroad track in Europe in the 11 months between D-Day and V-E Day. Included in the bridges were four rail spans across the Rhine River which are classified as permanent. The rail network extends from all major ports in France and Belgium into inner Germany. When hostilities ceased, the Army was operating six rail lines in Germany and seven others were under construction.

Air-ground. Regardless of the outcome of the struggle of the air component for independence either through a single defense department or in a new Air Department, the war demonstrated a multitude of methods by which some forms of aviation have become essential to efficient and successful ground operations. The larger aspects of strategic and tactical operations by Air Forces remains, of course, the "big punch" of air power, but there are many other ways by which aviation works intimately with the ground forces and helps get it forward.

Troop carrier operations in which conventional infantry and supporting arms are moved by transport planes, and parachute operations where trained paratroop men jump ready for combat, continue to be developed as specialized operations.

Air supply of ground troops permits operations in areas inaccessible to other forms of communication, as was so well demonstrated in the Burma campaign.

Air evacuation of wounded has been used in all theaters and undoubtedly has saved thousands of lives and avoided untold suffering by getting the men out of the danger area promptly and into safe, well equipped hospitals.

The use of small airplanes for spotting artillery fire has proved its worth and its use will continue and develop.

Thus regardless of the main impact of air power as an independent striking force, the uses of aviation in direct and intimate relationship with ground armies has shown marked increases.

Redeployment. The surrender of the German Armies on May 8 created the problem of military redeployment, to bring the greatest part of Allied strength to bear against Japan in the shortest possible time. This faced all of the major powers in varying degrees. England's problem was mostly naval. She did not plan to transfer any appreciable numbers of ground troops. Canada brought one infantry division with necessary ancillary troops from Europe to Canada. It was agreed that this division was to be re-equipped and retrained along United States lines and then to be sent to the Pacific to operate with U. S. forces. But the end of the war prevented completion of this project.

It was upon the United States forces with their 3,500,000 troops in Europe, that the greatest brunt of redeployment fell. The United States Army plan, which was put into effect when Germany collapsed and operated successfully until the surrender of Japan, called for the return of approximately 845,000 men, or slightly more than 280,000 a month, from Europe to the United States during the first three months after V-E Day. The second quarter was to have seen the return of 1,185,000, and the third quarter 807,000 men.

The United States was a huge staging area for the Pacific war, with retraining in progress and with immense stockpiles in western areas and even in East Coast port areas. Some troops, particularly specialized service units but also combat divisions, were redeployed directly from Europe to the Pa-

cific theater without stopping in the United States, but for most units plans called for redeployment by way of the United States.

When the Japanese indicated their desire to surrender, early in August, 2,760,000 men still remained in Europe, about 3,000,000 in the United States, and 2,000,000 in the Pacific. At this point the problem shifted from redeployment to demobilization.

Demobilization. After the fall of Germany the Army had put into effect a plan for the release of soldiers based on a "point system" in which men were given credits as follows:

One credit for each month in the Army since September 16, 1940.

One credit for each month served overseas.

Five credits for each of a list of specified decorations for combat service and for battle participation stars.

By the end of the year requirement for enlisted men's release was dropped to 37 points, officers' 44, and others proportionately.

As of Nov. 15, the composition and deployment of the vessels engaged in returning U.S. personnel to this country was as follows:

In the Atlantic:

80 U.S.-controlled troopships with total capacity of 242,489.

210 converted Liberty ships with total capacity of 115,000.

87 converted Victory ships with total capacity of 168,450.

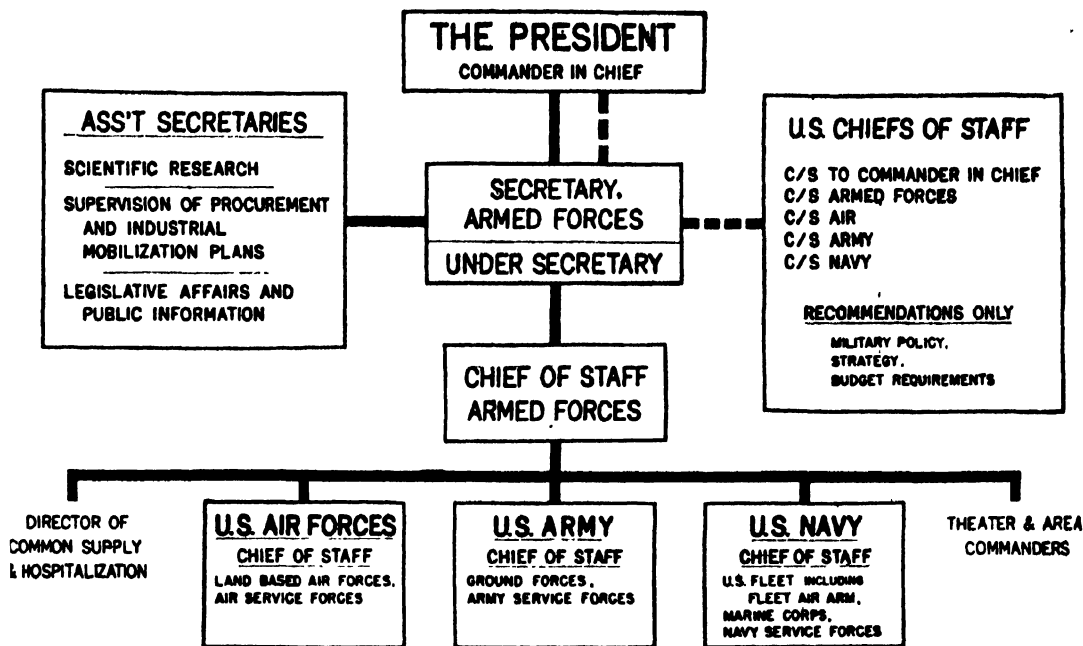
1 British ship (*Queen Mary*) with capacity of 11,400.

15 Navy carriers and other combatant vessels with total capacity of 36,212 (total lift assigned to Army).

7 Hospital ships with total capacity of 4,969 patients.

Total troop lift in the Atlantic—578,520.

Average turnaround per ship—five weeks.



THE WAR DEPARTMENT'S PLAN FOR A SINGLE ARMED FORCES DEPARTMENT

Twelve credits for each child under 18 years of age up to a limit of three children

A total of 85 points or less would qualify a man for discharge. The total score required for discharge was gradually reduced until by the end of the year only 50 was required for release of enlisted men and 70 for commissioned officers.

In the U.S. Navy, Marine Corps, and Coast Guard, no release score was set until after the Japanese capitulation, at which time the Marine Corps instituted a system granting points on the same basis as the Army and set 85 as the number required for discharge. The Navy set up a different system awarding credits to Navy and Coast Guard personnel on the following basis:

One-half point for each year of age

One-half point for each full month of active duty since September 1, 1939.

Ten points if the individual has a dependent.

Based on these points the Navy set up four critical scores for release:

- 44 for enlisted male personnel.
- 29 for enlisted WAVE personnel
- 49 for male officer personnel.
- 35 for WAVE officer personnel

In the Pacific:

178 U.S.-controlled troopships with capacity of 357,857

16 Army Hospital Ships with a lift of 11,418

178 Navy assault transports with a lift of about 264,352.

96 Navy combatant and other type vessels with capacity of 117,289.

8 Navy Hospital Ships with a lift of 7,088

Of total Navy lift of 388,729, Army assigned 152,200

Total troop lift in the Pacific—791,959.

Average turnaround per ship—ten weeks

The War Department announced the following target dates by which all American troops abroad would be returned to the United States.

a. In Europe and the Mediterranean: Withdrawal of all troops before the end of January, 1946, except for occupation forces and the minimum required to dispose of the Army's surplus property. Strength of the occupation army was set at 370,000. The close-out force of 300,000 will be released gradually, and will be home by the end of June.

b. In the Pacific and all other areas: Withdrawals to reduce forces to occupation and garrison complements in the Pacific (400,000) and elsewhere (100,000) will be complete by the end of

June. Shipping will not be a critical factor after mid-April.

Organization. With armed hostilities over and the period for demobilization of the vast forces begun, plans for the postwar military establishment were discussed. The War Department's plan was presented to the House Select Committee on Postwar Military policies substantially as follows:

1. A military establishment including the Regular Army, National Guard and the Organized Reserves—these three components to furnish the military units necessary for the initial mobilization for national defense in the event of emergency.
2. Universal military training.
3. An efficient and practicable means for industrial mobilization.
4. Adequate program of military research and development.

The Regular Army, according to the War Department's plan, should have peacetime functions as follows:

“First, it must keep informed of the war-making capabilities of all foreign nations;

"Second, it must furnish personnel to man our domestic garrisons and foreign stations;

"Third, it must be adequate to meet quickly a limited emergency which might arise before we can mobilize our citizen Army;

"Fourth, it must continue as the professional part of our military system to conduct the study and development of new arms, strategy and military technique, and,"

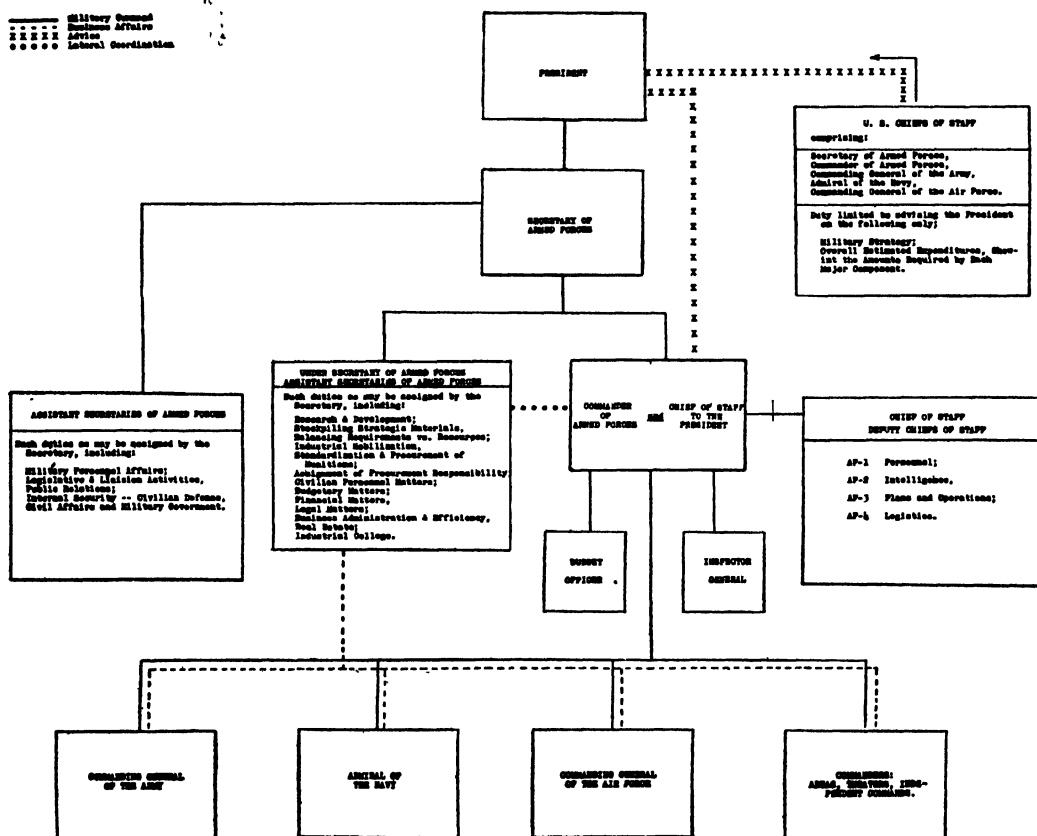
"Lastly, it must be responsible for the training

of our vast citizen forces to include the furnishing of administrative and supervisory overhead."

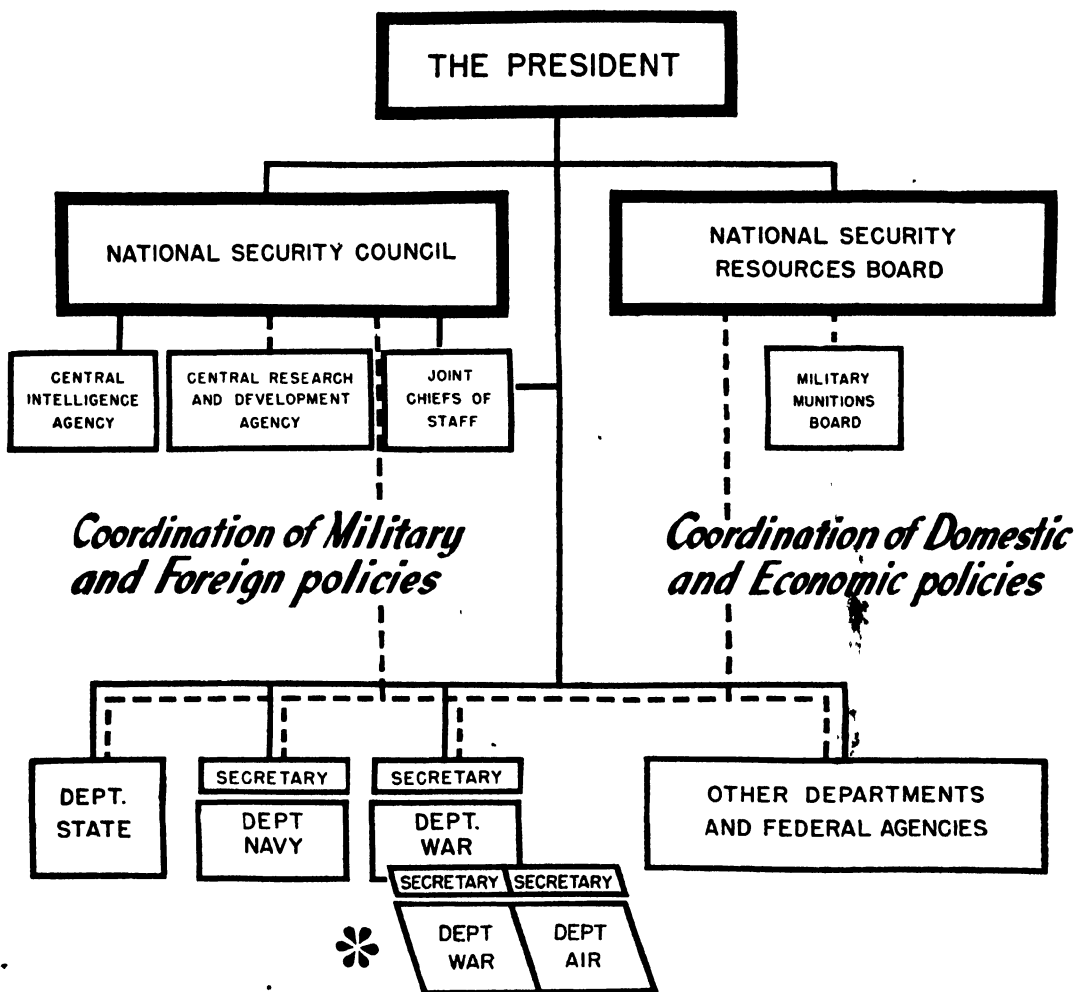
Simple Department. The movement toward greater unity in the administration and operation of the Armed Forces gathered momentum during the year, culminating Dec. 19 in a recommendation to Congress by President Truman that legislation be enacted consolidating the War and Navy Departments into a Department of National Defense.

The President asked Congress to reorganize the Armed Services along the following broad lines:

1. A single department charged with full responsibility for armed national security.
2. A civilian Secretary of National Defense with a civilian Under Secretary and several civilian Assistant Secretaries.
3. Three coordinated branches of the Department of National Defense; one for the land forces, one for the naval forces, and one for the air forces, each under an Assistant Secretary. The Navy should retain its own carrier-, ship-, and water-based aviation. The Marine Corps, too, should be continued as an integral part of the Navy.
4. The Under Secretary and the remaining Assistant Secretaries should be available for assignment to whatever duties the President and the Secretary may determine from time to time.
5. The President and the Secretary should be provided with ample authority to establish central coordinating and service organizations, both military and civilian.
6. There should be a chief of staff of the Department of National Defense. There should also



THE JOINT CHIEF OF STAFFS' PLAN FOR A SINGLE ARMED FORCES DEPARTMENT



THE NAVY DEPARTMENT'S PROPOSAL FOR A NATIONAL SECURITY SET-UP

be a commander for each of the three component branches—Army, Navy, and Air.

7. The chief of staff and the commanders of the three coordinate branches of the Department should together constitute an advisory body to the secretary of national defense and to the President. Key staff positions in the department should be filled with officers drawn from all the services, so that the thinking of the department would not be dominated by any one or two of the services. As an additional precaution, it would be wise if the post of chief of staff were rotated among the several services. The tenure of the individual officer designated to serve as chief of staff should be relatively short—two or three years.

The President listed his reasons for combining the two existing departments as follows:

1. We should have integrated strategic plans and a unified military program and budget.

2. We should realize the economies that can be achieved through unified control of supply and service functions.

3. We should adopt the organizational structure best suited to fostering coordination between the military and the remainder of the Government.

4. We should provide the strongest means for civilian control of the military.

5. We should organize to provide parity for air power.

6. We should establish the most advantageous framework for a unified system of training for combined operations of land, sea, and air.

7. We should allocate systematically our limited resources for scientific research.

8. We should have unity of command in outlying bases.

9. We should have consistent and equitable personnel policies.

In April a Special Committee for Reorganization of National Defense, appointed by the Joint Chiefs of Staff in 1944, submitted a report recommending that a single department system of organization of the Armed Forces be adopted. The report was signed by Rear Adm. M. F. Schoeffel, U.S.N., Maj. Gen. H. L. George, U.S.A., Maj. Gen. W. F. Tompkins, U.S.A., and Col. F. Trubee Davison, A.U.S. Adm. J. O. Richardson, U.S.N.-Ret., Senior Member of the Committee, dissenting from the majority views, submitted a minority report proposing that the Joint Chiefs of Staff organization be continued by statute and that study of reorganization and the advisability of a Joint Secretaryship be continued.

The majority report recommended an organiza-

tion which included a Secretary of Armed Forces, a Commander of Armed Forces, a Chief of Staff to the President, a Commanding General of the Army, an Admiral of the Navy, and a Commanding General of the Air Force.

In its report the majority said:

"The fundamental reason that unity of command in theaters of operations has not accomplished the necessary integration is that each component of the Army and Navy under a theater commander is actually part of a separate Department in the United States to which it owes its first allegiance and from which it derives different methods and techniques for accomplishing similar operational and supply purposes. Because of this, the theater commander's ability effectively and efficiently to carry out his command decisions is hampered by conditions over which he has little or no control.

"This is the situation after three years of war. It appears that about all the progress realizable through the existing cooperative system has been made. It is believed that much better teamwork in waging war would have resulted had the system herein proposed been in effect at the war's outset. If peace should find the Armed Forces still operating under the present system, with no wartime compulsion to get together, even the existing degree of cooperation can be expected to disappear. This situation will be aggravated by the forced readjustment to peacetime conditions. It is inconceivable that under these conditions an effective unity of command could be established in any area, because each of the forces under an area commander would look more and more to its own Department in Washington for directives on administration and supply, thus reducing the authority and prestige of the area commander."

In October the Senate Committee on Military Affairs opened hearings on proposals for the creation of a single department. First witnesses were Secretary of War Robert P. Patterson; General of the Army George C. Marshall, then Chief of Staff of the Army; and General of the Army Henry H. Arnold, Commanding General Army Air Force, all of whom endorsed the principle of a single department with the Air Force on a parity with the Army and Navy.

Subsequently a detailed organizational plan, drafted and sponsored by the War Department, was explained to the Committee by Lt. Gen. J. Lawton Collins, U.S.A., then Chief of Staff, Army Ground Forces. Gen. Collins said that the plan was designed to permit each of the Services to retain most of its present autonomy, with the Army Air Forces severing its ties to the present War Department and completing its independence. General Collins said:

"The United States Air Forces, Army and Navy are set up as autonomous members of our Armed Forces. Each would have its own Chief of Staff who would be responsible for the internal organization and conduct of his division of the Department and for the organization, development and training of the elements of the armed forces under his direction.

"The Air Force should include all land-based combat aircraft except those allotted to the Army and Navy for reconnaissance, spotting of gunfire, command and messenger service. The Air would retain its own service forces.

"The Army would include all combat ground forces other than the Marine Corps and would have its own service forces.

"The Navy would include the United States

Fleet with its air arm, the Marine Corps and its service forces."

The consolidation project was opposed before the Committee by Secretary of the Navy James Forrestal and by all Naval and Marine Corps officers who testified.

Secretary Forrestal favored the development of closer integration through the creation of a National Security Council, with the President as ex-officio chairman, composed of the Secretaries of State, War, Navy, and, possibly, a Secretary of Air. The Secretary urged further study by an independent board along the lines of the Morrow Board of 1925.

As the year ended, the Committee still had the proposal before it and, bolstered by the President's recommendations, was planning to take action early in 1946.

LEROY WHITMAN.

MINERALS AND METALS. The U.S. Bureau of Mines reports mineral production for 1944 climbed to a record total of \$8,543,000,000, 4.7 percent above 1943 and 21.1 higher than the prewar record established in 1920. Fuels—coal, natural gas, gasoline, petroleum and allied products—contributed the major share of this prodigious sum: \$5,254,000,000. New high marks were also set in pig iron and steel—pig and ferro-alloys reaching 62,866,198 tons, while our steel mills turned out 89,641,600.

[The different products of the mineral industry are described in separate articles.]

This unprecedented output was accomplished in spite of a 9 percent decline of the total labor force in the mineral industries from the already depleted supply in 1943. By working more days and longer hours the loss in man-hours was held to only 2 percent.

The gain was also in the face of a lack of price incentive: mineral prices were up but 23.2 percent from 1940 including premiums, whereas farm products advanced 82.1 percent and the level of all commodities 32.3.

Also, depletion barred increase in some products. For 60 years the nation has drained its resources, and compensating development lagged badly during the prolonged depression and the hectic activities of war. Add the handicaps of transportation controls, shortages of equipment, swollen costs, and the shut-down orders for gold and silver mines, and the magnitude of the achievement becomes clearer.

Consumption of many mineral commodities decreased from 1943, but new marks were set in some important fuels, in a few metals, and in fertilizers, giving probably a slight net gain in consumption. There was considerable relaxation of inventory and use controls, but some of this proved premature and had to be rescinded following the temporary reverses on the European front late in the year. Imports continued high, and though government stockpile objectives were reduced, inventories of many minerals mounted. Declines in industry stocks only partly affect these rises, so that the country's total mineral inventory showed a gain.

Draining off 11 million men into the armed forces, and concentration on certain "supercritical" activities produced many headaches for the mining industry. Its total labor force dropped steadily—835,183 men in 1941, 783,320 in 1943, 693,800 in 1944. The only answer was more and longer workdays for those who carried on: each employee worked 150 hours more in 1944 than in the pre-

ceding year; so, while total man-days were 7 percent lower, total man hours declined 2 percent.

Safety. The over-all safety record improved and was better than in any year since the start of complete statistics on mining and quarrying in 1930. Despite loss of skilled workers and pressure on the reduced force, with the fatigue of longer hours, there was a combined frequency rate of fatal and non-fatal injuries of 56.01 per million man-hours of exposure to hazards. Ten years before that rate was 78.81. Greatest improvement came in coal mining, while the quarry and coke industries had a higher rate than in 1943.

Strategic and Critical Materials. On Nov. 20, 1944, the Munitions Board approved the following definitions and lists:

1. The definition of strategic and critical materials is as follows: "Strategic and critical materials are those materials required for essential uses in a war emergency, the procurement of which in adequate quantities, quality, and time is sufficiently uncertain for any reason to require prior provision for the supply thereof."

2. Within the above definition, materials are listed either in group A, group B, or group C, according to the following provisions

(a) Group A comprises those strategic and critical materials for which stockpiling is deemed the only satisfactory means of insuring an adequate supply for a future emergency.

(b) Group B comprises additional strategic and critical materials, the stock-piling of which is practicable. The Army and Navy Munitions Board recommends their acquisition only to the extent they may be made available for transfer from government agencies because adequacy of supply can be insured either by stimulation of existing North American production or by partial or complete use of available substitutes.

(c) Group C comprises those strategic and critical materials which are not now recommended for permanent stock-piling because in each case difficulties of storage are sufficient to outweigh the advantages to be gained by this means of insuring adequate future supply.

3. Materials in group A may be acquired in the manner prescribed for group B. Materials in all three groups are subject to constant surveillance and review. Additions to, or deletions from, the list, or movement of materials between groups, may be made, based upon future changes in their strategic and critical status.

4. The conduct of a war requires the use of an encyclopedic list of semi-processed and processed materials, such as aviation gasoline, synthetic rubber, chemicals, drugs, ferroalloys, steel, light metals, etc. Elevation from peacetime production to a wartime footing will necessitate constant review of the facilities available to meet anticipated requirements.

GROUP A

Agar	Sapphire and ruby V
Antimony.	jewels.
Asbestos ¹	Watch and timekeeping
Rhodesian chrysotile	device jewels.
South African amosite	Kapok ²
Bauxite.	Kyanite. Indian
Beryl	Lead.
Bismuth.	Manganese ore.
Cadmium	Battery grade
Castor oil ²	Metallurgical grade
Celestite.	Mercury.
Chromite:	Mica:
Metallurgical grade	Muscovite block and film,
Refractory grade	good stained and bet-
Rhodesian origin	ter.
Other origin	Muscovite splittings
Cobalt	Phlogopite splittings.
Coconut oil ²	Monazite.
Columbite.	Nickel.
Copper	Opium. ¹ 3
Cordage fibers. ²	Optical glass.
Manila.	Palm oil. ²
Sisal.	Pepper.
Corundum.	Platinum group metals:
Diamonds, industrial	Iridium.
Emetine.	Platinum.
Graphite:	Pyrethrum ²
Amorphous lump	Quartz crystals.
Flake.	Quebracho
Hyoscine	Quinidine
Iodine ¹ .	Quinine. ¹
Jewel bearings	Rapeseed oil ²
Instrument jewels, ex-	Rubber: 1 ²
cept V jewels.	Crude rubber.
	Natural rubber latex.

Rutile.
Sapphire and ruby.
Shellac.²
Sperm oil.²
Talc, steatite, block or lava.
Tantalite.
Tin.

Tung oil.²
Tungsten.
Vanadium.
Zinc.
Zirconium ores:
Baddeleyite.
Zircon.

¹ Require special storage conditions.

² Require rotation of stocks.

³ Stocks to be held by Treasury Department, Bureau of Narcotics.

GROUP B

Aluminum.
Barite.
Chalk, English.
Chromite, chemical grade
Cryolite, natural.
Diamond dies.
Emery.
Fluorspar:
Acid grade.
Metallurgical grade.
Graphite, crystalline fines.
Magnesium.¹

Mica:
Muscovite block, stained
and lower.
Phlogopite block
Molybdenum.
Platinum group metals
Osmium.
Palladium.
Rhodium.
Ruthenium.
Selenium.
Talc, steatite, ground
Wool.¹ 2

GROUP C

Asbestos, Canadian chrysotile¹
Bristles, pig and hog.²
Burlap, jute.²
Cordage fibers:²
Hemp, true American
Henequen.
Jute.
Cork²
Iron ore.
Leather:¹ 2
Calf and kip skins.

Cattle hides:
Heavy.
Light.
Loofa sponges¹
Lumber.
Balsa.
Mahogany
Petroleum and petroleum
products¹ 2
Radium.¹ 2
Scrap, iron and steel
Sesame oil²

¹ Require special storage conditions

² Require rotation of stocks

The minimum quantities of group A materials recommended for stockpiling were computed on the basis of certain strategic assumptions determined by the Joint Chiefs of Staff and the United States consumption (including military, Lend-Lease, and essential civilian requirements) during the peak year of the present war. In addition, the figures reflected the following considerations.

(a) Compensation for any known depletion of, or reasonably certain increases in, available resources in the United States;

(b) A similar compensation for known anticipated changes in resources of material outside the United States (as to which we have comparatively meager information at the present time);

(c) Adjustment for anticipated increases or decreases in future military requirements as the result of technological changes already evident;

(d) Adjustments wherever consumption data indicate that it has been necessary to use inferior grades of material in the present war; and

(e) Limitations imposed upon the stockpiles of perishable materials by reason of the necessity of rotating the quantities involved.

The maximum quantities of group A materials were determined on the basis of the following additional considerations needed to provide additional security.

(a) Supply from foreign sources as it may be affected in a future emergency by international political and economic conditions;

(b) The inordinate expenditures of manpower, equipment, and money which may be required to build up supplies of certain materials;

(c) Maintenance of an industrial economy at a higher level of efficiency than that prevailing during the current emergency by minimizing drastic dislocations resulting from critical shortages; and

(d) Requirements as they may be affected by the civilian needs of a population of the United States larger than the present population.

The report also emphasizes the need for constant review and revision of strategic and critical lists and stockpile objectives to reflect changes in technology and shifts in political and economic factors that affect the strategic status of raw materials.

The following suggestions as to future stockpile legislation were offered:

We recommend that the Congress adopt further stockpiling legislation in order to eliminate certain undesirable features of established policies relating to the procurement and release of materials for government stockpiling. In view of the substantial depletion of domestic resources

during the present war, statutory domestic preference requirements, allowing a year for deliveries from domestic production and the preference for domestic materials, as provided in the act of June 7, 1939, and the Buy American Act, respectively, are too restrictive. We believe that these requirements must be relaxed. Provision should also be made to permit the disposal of materials in stockpiles which have become obsolete, due to technological developments, as well as to permit rotation of those which are subject to deterioration.

We further emphasize that the acquisition of stockpiles in even the minimum quantities recommended in this report must be a gradual process, and will require periods ranging from 1 to 10 years, depending upon the material to be accumulated. This is because production of some of the materials in normal times is little beyond normal requirements of peacetime industry. In view of this fact, and the likelihood that in a future war we shall not have the time required to make the necessary provision for materials, it is important that an early beginning be made toward accomplishing a sound stockpile program.

Closely related to stock-piling are several other measures that should be given consideration in connection with any plan for the supply of strategic materials in war. On account of the direct bearing which these measures have on the kinds and quantities of materials that should be stockpiled, it seems appropriate to include them under these suggestions for future legislation. We refer to provisions for stand-by facilities, pilot-plant operations, continuous technological research, and the development of more economical processes for the utilization of domestic marginal resources.

In July, 1945, W. Stuart Symington became Chairman of the recently reorganized Surplus Property Disposal Board, charged, among other things, with the care, handling and disposition of stocks of metals, government owned processing plants, and transfer of surplus between government agencies.

MINES, Bureau of, U. S. Department of the Interior. As the only Government agency dedicated entirely to a more efficient conservation and utilization of American mineral resources through scientific investigation and research, the Bureau of Mines in 1945 explored mineral reserves, developed metallurgical processes, promoted health and safety programs, conducted investigations and research on coal, petroleum, synthetic liquid fuel, explosives, and other commodities, produced helium for war and peace, and performed economic and statistical services for all branches of the minerals industry. Work was carried on in field offices, research laboratories, and metallurgical stations in more than 60 important mining centers throughout the United States and Alaska.

America's success in the "war of metals and fuel" was aided to a great extent by the Bureau's wealth of "know how" in mining, manufacturing, and processing minerals, gained through three and a half decades of research and investigation. Added benefits were realized in the 1945 reconversion period as the Bureau continued to serve as consultant and adviser to industrial plants and to State and federal agencies. Peacetime operations will further utilize the fruits of Bureau technical developments and scientific research.

Mineral Exploration. As the United States and her allies demanded more and more mineral commodities in 1945, the Bureau of Mines increased its efforts to find new and better reserves of essential ores for war and replacement of war-depleted re-

MINERAL PRODUCTION BY STATES, 1944
(U. S. Bureau of Mines)

State	1943	1944	Rank	Per Cent of Total for U. S.	Principal Mineral Products in Order of Value
Ala.....	\$102,013,000	\$108,460,000	20	1.43	Coal, iron ore, cement, stone
Ariz.....	124,574,000	115,600,000	13	2.25	Copper, gold, zinc, silver
Ark.....	80,864,000	68,423,000	27	.78	Bauxite, petroleum, coal, natural gas
Calif.....	569,388,000	606,918,000	3	8.58	Petroleum, natural gas, natural gasoline, cement
Colo.....	87,924,000	79,598,000	19	1.48	Molybdenum, coal, zinc, gold
Conn.....	4,835,000	4,496,000	41	.11	Magnesium, stone, clay products, sand and gravel
Del.....	367,000	182,000	48	.01	Clay products, sand and gravel, stone, raw clay
D.C.....	100,000	111,000	49	.01	Clay products
Fla.....	25,070,000	21,852,000	33	.32	Phosphate rock, stone, cement, gravel
Ga.....	20,967,000	18,965,000	35	.29	Raw clay, stone, cement, clay products
Ida.....	57,475,000	51,321,000	28	.75	Zinc, lead, silver, tungsten ore
Ill.....	318,270,000	331,497,000	6	4.77	Coal, petroleum, stone, sand and gravel
Ind.....	82,632,000	91,148,000	15	1.84	Coal, cement, petroleum, stone
Iowa.....	24,027,000	24,458,000	29	.74	Coal, cement, stone, clay products
Kan.....	220,438,000	219,678,000	9	2.71	Petroleum, natural gas, zinc, coal
Ky.....	226,597,000	273,597,000	8	2.78	Coal, natural gas, petroleum, stone
La.....	267,617,000	304,894,000	12	2.37	Petroleum, natural gas, natural gasoline, sulfur
Me.....	2,720,000	2,146,000	42	.11	Sand and gravel, cement, stone, slate
Md.....	17,095,000	15,399,000	32	.37	Coal, sand and gravel, cement, stone
Mass.....	5,441,000	5,280,000	36	.23	Stone, sand and gravel, lime, clay products
Mich.....	156,875,000	151,992,000	10	2.69	Iron ore, petroleum, salt, natural gas
Minn.....	177,687,000	170,465,000	11	2.63	Iron ore, manganese ore, sand and gravel, stone
Miss.....	21,148,000	18,988,000	40	.12	Petroleum, sand and gravel, clay products, raw clay
Mo.....	70,945,000	72,369,000	18	1.55	Lead, coal, cement, zinc
Mont.....	91,633,000	89,479,000	17	1.76	Copper, petroleum, coal, zinc
Neb.....	6,830,000	5,060,000	43	.10	Cement, sand and gravel, stone, petroleum
Nev.....	56,312,000	51,800,000	26	.79	Copper, magnesium, gold, tungsten ore
N.H.....	1,350,000	1,168,000	46	.05	Mica, feldspar, clay products, stone
N.J.....	37,583,000	33,794,000	21	1.15	Zinc, sand and gravel, clay products, stone
N.M.....	124,392,000	126,280,000	23	1.03	Petroleum, potassium salts, copper, natural gas
N.Y.....	87,942,000	88,015,000	16	1.78	Petroleum, iron ore, zinc, salt
N.C.....	22,172,000	22,199,000	38	.23	Bromine, stone, clay products, mica
N.D.....	4,657,000	4,671,000	45	.06	Coal, sand and gravel, natural gas, clay products
Ohio.....	186,366,000	190,967,000	7	4.27	Coal, natural gas, stone, clay products
Okl.....	253,284,000	260,576,000	5	7.05	Petroleum, natural gas, zinc, natural gasoline
Ore.....	12,310,000	9,668,000	39	.15	Sand and gravel, cement, stone, mercury
Penn.....	889,156,000	989,949,000	1	18.03	Coal, natural gas, petroleum, cement
R.I.....	808,000	612,000	47	.02	Stone, sand and gravel, graphite, clay products
S.C.....	4,759,000	4,192,000	44	.07	Stone, clay products, raw clay, sand and gravel
S.D.....	8,611,000	5,465,000	34	.30	Gold, stone, raw clay, cement
Tenn.....	65,053,000	63,382,000	25	.87	Coal, stone, zinc, cement
Tex.....	1,116,056,000	1,319,378,000	2	10.29	Petroleum, natural gas, natural gasoline, sulfur
Utah.....	160,935,000	150,153,000	14	1.95	Copper, coal, gold, zinc
Vt.....	6,404,000	7,672,000	37	.23	Stone, slate, talc, lime
Va.....	82,068,000	88,528,000	24	.96	Coal, sand and gravel, zinc
Wash.....	37,547,000	36,320,000	30	.51	Cement, sand and gravel, coal, magnesite
W. Va.....	560,330,000	612,366,000	4	7.44	Coal, natural gas, petroleum, natural gasoline
Wis.....	18,925,000	22,794,000	31	.39	Stone, iron ore, zinc, sand and gravel
Wyo.....	68,664,000	73,031,000	22	1.08	Petroleum, coal, natural gas, iron ore

serves. By drilling, trenching and other types of exploration, the Bureau charted millions of tons of ore in new and known mineralized areas. New mines opened where drilling crews proved substantial reserves, and old mines reopened where ore bodies were extended in apparently exhausted known areas.

Examinations, geophysical surveys, and surface and subsurface exploratory work of the Bureau of Mines proved again that this country has reserves of minerals which formerly were imported, but that these reserves, with few exceptions, are generally of lower grade than the imported ones. The extensive exploratory program of the Bureau in 1945 covered the examination of 850 ore deposits and the conducting of 150 exploratory projects. Special attention was given to proving reserves of tungsten, vanadium, chromium, zircon, coking coal, fluorspar, mica, asbestos, optical calcite, crystalline quartz, and other critical minerals. Lead and zinc deposits were explored in a dozen States, to reveal the existence of reserves in Idaho, Illinois, Kansas, Nevada, and Oklahoma.

Millions of tons of usable iron ore were proven in Alaska, Arizona, Missouri, New Jersey, New York, Pennsylvania, Utah, and Virginia; results of investigations in Alabama revealed that high recoverables are possible from iron ore found in tailings; and 44 deposits of ferro-alloying minerals were investigated. Two important low-grade copper sources in Pima and Coconino Counties, Ariz., were confirmed by Bureau engineers. In the quest for domestic sources of tin, Bureau investigators diamond-drill tested a potentially valuable lode deposit on the Seward peninsula in Alaska. A low-grade mercury ore deposit in Napa County, Calif., was marked out by the Bureau and the metallic content was determined to run as high as 10,000 flasks of 76 pounds each. The development of domestic mica, as well as feldspar, beryl, tantalum, and lithium minerals, was materially aided in 1945 by exploratory investigations of pegmatites in six States. Reserves of bauxite, the chief ore of aluminum, were swelled to about 90 million tons, including all grades, by deposits proven through large-scale exploratory drilling in Alabama and Arkansas.

In the course of conducting hundreds of exploratory projects, the Bureau developed many technical refinements in diamond drilling, bulldozer trenching, and geophysical exploration, which greatly reduce operating costs and expedite the business of mineral discovery and proving.

Metallurgical Activities. Beyond the task of finding the mineral deposits, the Bureau of Mines is delegated to work out methods for making the minerals usable. To do this, it now has 12 metallurgical stations—pilot plants, small-scale test mills, furnaces, and other equipment—to demonstrate how, by modern milling and metallurgical processes, marginal and submarginal materials can be forced to relinquish their mineral treasures. Great strides were made in the development of new ways to convert complex and low-grade materials into high-grade metals and nonmetals to fit exacting specifications. The dependence of this country upon foreign sources of manganese was substantially lessened as a result of federal and cooperative investigations in the production by electrolytic methods. Ferro-alloys pilot plants at Rolla, Mo., and Redding, Calif., drew nearer completion and plans were concluded for a similar plant at Raleigh, N. C. The electrolytic chromium pilot plant at Boulder City was the scene of successful treatment of low-grade chromite from Montana. Important progress

was made in the hydraulic classification and flotation of Alabama iron ores. Beneficiated magnetite samples from Shasta, Calif., were separated magnetically at the sponge iron pilot plant in Laramie, Wyo., and the concentrates were reduced. Methods of reducing zircon in Oregon beach sands to zirconium metal were investigated at the Northwest Electrodevelopment Laboratory in Albany, Oregon. Extraction of alumina from low-grade bauxites, alunite, and clays was continued at several laboratories and pilot plants. Work on the reduction of copper, lead, and zinc at Salt Lake City showed considerable progress; and construction of a pilot plant at Rolla, Mo., for the reduction of zinc with methane was finished. Laboratory and pilot plant tests were made on fluorspar from domestic, Spanish, and Mexican varieties of materials stockpiled by the Metals Reserve Company. Sillimanite concentrate was shown by results of experiments made at the Electrotechnical Laboratory in Norris, Tenn., to be a satisfactory substitute for scarce kyanite in the manufacture of refractory brick.

Petroleum and Natural Gas. Military demands for aviation gasoline and lubricants, fuel for flame throwers and jet-propulsion planes, and an array of petroleum products for explosives, medicinals, and insecticides, placed added emphasis on the Bureau's research work in petroleum and natural gas. Studies on primary recovery methods were intensified in the Gulf Coast region, the Rocky Mountain fields, and in California. Analyses were made of more than 600 unconsolidated core samples, and the physical characteristics were determined. Bureau assistance to the petroleum industry also necessitated studies of secondary recovery methods, transportation and storage of natural gas, chemistry and refining processes, thermodynamics of crude petroleum and its products, testing condensate fields, recovery of wax, and the extraction of oil from mined rocks. The Bureau also inaugurated a research program on sulfur in petroleum. The results of these studies in 32 reports were made available to operating companies and federal agencies concerned with lubricants, fuels, and chemicals needed to win the war.

Helium. Although commercial demands for helium increased 65 percent in 1945, military demands declined and two of the Bureau's five plants were shut down. However, Army and Navy "E" stars went to the Amarillo and the Exell plants, and an "E" flag to the Otis plant in recognition of outstanding war production earlier in the year. Helium, separated from privately-owned natural gas being piped to market, was stored underground in the Government's Cliffside Gas Field. The United States Government is the world's sole commercial producer of helium gas, and the Bureau of Mines operates the Government's plants and conducts research in helium.

Research in Coal. The Bureau's many-sided program of coal research during the year stressed improvements in the preparation and up-grading of coal, better mining methods, and conservation through more effective utilization. Engineers and chemists sampled and analyzed more than 20,000 specimens as part of the Bureau's work of advising the industry and federal agencies on fuel and equipment specifications. Recommended changes in the use of fuels and equipment at a large number of Army camps saved thousands of tons of coal. Studies in methods of combating corrosion in Federal boiler plants brought better protection for approximately 300 million dollars worth of steel equipment. Bureau engineers cooperated with an-

thracite producers to find ways of preventing mine flooding and to develop safe methods of mining in thin, steeply-pitching anthracite beds. Methods of reducing the sulfur and ash content of coking coals were studied, and laboratory coking tests and petrographic examinations were made of 150 coals from this country, Chile, and China. The burning characteristics of emergency fuels were studied through analysis of more than 200 ash samples. Washability data, furnished by the Bureau of Mines, served as the basis for designs used by two Alabama companies. Investigations also were made on the storage properties of about 35 different coals. Supported by several thousand volunteer engineers and fuel experts and more than 13,000 co-operating industrial plants, the Bureau of Mines successfully continued its fuel-efficiency program during the year, designed to conserve fuel in plants, factories, hotels and other large installations.

Gas- and Dust-Explosion Research. To help prevent explosions which result from various dusts, powders, and vapor-air mixtures in coal mines and in industrial plants, the Bureau analyzed about 19,000 gas and dust samples, and formulated recommendations and safety codes for the guidance of industry in combatting such hazards.

Synthetic Liquid Fuel. As the Bureau of Mines' five-year synthetic liquid fuel program was shifted into high gear, three historic installations for producing gasoline and oil from coal, lignite, and oil shales were under construction. One of them, a coal research and development laboratory, was started at Bruceton, Pa., where fundamental research, process development, and engineering design work were being carried on by a staff of over 100 scientists in temporary quarters. A laboratory for research on oil shale was begun at Laramie, Wyo., and the third, an oil shale demonstration plant, showed progress in its construction at the Naval oil shale reserve near Rifle, Colo. Studies in the processing of marketable oil products from shale were carried on under temporary arrangements to advance the work while the Laramie and Rifle installations were being built. An oil-shale mine was opened near the Rifle plant for the dual purpose of developing low-cost mining methods and of supplying the plant with oil shale materials. The fourth major unit in the Bureau's five-year synthetic liquid fuels program—a demonstration plant for the production of gasoline and oil from coal and lignite—also came into being later in 1945 when the Bureau acquired from the War Department a \$17,500,000 synthetic ammonia plant known as the Missouri Ordnance Works, at Louisiana, Mo. This plant is to be converted into a demonstration plant for testing on a large scale the processes developed at the Bruceton, Pa., laboratory. Its acquisition will save the Government several million dollars in construction costs and is expected to speed up the federal synthetic liquid fuels research and demonstration program.

Explosives Research and Testing. Greater safety and efficiency in the manufacture and handling of explosives was promoted by the Bureau. In investigating explosives problems, more than 5,000 analyses and tests were made—including 419 chemical analyses, 2,717 gallery tests, and 2,029 other control tests. Five newly-tested permissible explosives brought the list of approved explosives to 178 items. An electronic chronoscope capable of measuring time intervals of one-millionth of a second was invented by Bureau explosives engineers. As a result of working agreements with the War and Navy Departments, the hazards involved in the storing and handling of military explosives and in-

cendiary materials were experimentally determined and a related study on the dangers associated with electrostatic ignition was begun.

Promotion of Health and Safety. Major health and safety activities in 1945 embodied accident-prevention training, safety education, accident investigation, testing of materials and equipment, coal-mine inspection and reporting, explosives control, cooperation with the military in preventing sabotage, and field and laboratory studies on the occurrence of gases, dust, extreme temperatures, and various conditions affecting the physical well-being of mine workers. Federal inspectors in the last fiscal year examined health and safety conditions and practices in more than 3,000 coal mines, assisted the mine-rescue work in virtually all major mine disasters, and investigated 31 mine explosions in 12 states, 52 mine fires in 20 states, and 132 miscellaneous accidents in 30 states. Safety engineers trained over 18,000 persons in first-aid and mine-rescue procedures, participated in the conduct of first-aid contests in five states, instructed mine workers and officials in about 1,200 complete accident-prevention courses and 600 partial courses, and attended 494 safety meetings in 29 states. To determine the permissibility of electrical equipment designed for use in mines, the Bureau conducted 1,327 explosion tests. Investigations also were continued on the operating safety of equipment intended for Naval use.

Mineral Production Security Program. Security engineers of the Bureau of Mines, in cooperation with personnel of the Army, Navy, FBI, and other organizations, acted on behalf of the Government in the prevention of subversive acts within the minerals industry. This function officially ended June 30, 1945. During the active half-year, anti-sabotage surveys were made at 36 operating facilities previously uninspected, and the reinspections made totaled 395 cases.

Explosives Control. Although the administration of the Federal Explosives Act tapered off after the war closed, recapitulation disclosed that the Bureau in 1945 issued about 90,000 licenses through 3,900 volunteer licensing agents, and inspected more than 16,000 explosives magazines through its staff of special investigators. Under the act, about 750,000 licenses were issued in the three-and-a-half years of operation, with only 56 of these having to be revoked, of which 14 were finally restored.

Economics of the Mineral Industry. In "feeling the pulse" of the industry while it underwent transactions in scores of mineral commodities, the Bureau's work in 1945 continued to grow in scope and importance. Operating on a daily basis, the Bureau supplied the armed services, emergency agencies, and "old line" Government departments with facts and figures of production, distribution, and consumption of all mineral commodities. Information on the sources of foreign minerals was gathered by members of the Bureau's staff of experts—some in foreign countries. Problems in the stockpiling of domestically-scarce minerals were analyzed by the Bureau's commodity specialists in cooperation with the military; and basic information required for the disposition of the surplus scrap problem was obtained through expansion of the Bureau's economics and statistics program.

Public Reports. To comply with requests for technical and scientific information on the multiplicity of minerals activities, which is needed by industry, war agencies, and the public generally, 660 essential reports were printed and distributed by the Bureau. Among them were bulletins, technical papers, Minerals Yearbook chapters, miners' circulars, re-

ports of investigations, information circulars, and many statistical reports issued periodically for industry. The Bureau of Mines library of selected reference material was enlarged by 2,351 books and pamphlets, 207 bound volumes of periodicals, and 247 issues of current periodicals. Loans of materials by the library amounted to 19,611 pieces drawn for special reading. Films depicting the latest mineral production techniques, advanced methods of mining and transportation, and faster and safer equipment were in constant demand for use by scientific and engineering societies, war-training and rehabilitation classes, educational institutions, civic organizations, and military centers at home and abroad. During the year, Bureau-sponsored films were exhibited before audiences totaling 8,000,000 people on about 85,000 occasions. Three new sound-motion pictures, "A Story of Copper," "Sand and Flame," and "A Story of Arc Welding," were placed in the Bureau's library of more than 10,000 reels which have been produced under the supervision of the Bureau of Mines in cooperation with and paid for by the mineral industry.

R. R. SAYERS.

MINT, Bureau of the. A Bureau of the U.S. Department of the Treasury which directs the coinage of money and supervises the activities of the three Mints (Philadelphia, Denver, and San Francisco), the two Assay Offices (New York and Seattle), the gold Bullion Depository at Fort Knox, Ky., and the silver Bullion Depository at West Point, N. Y. Director: Mrs. Nellie Tayloe Ross.

MONACO. A Mediterranean principality surrounded on its land sides by the French department of Alpes-Maritimes. Area, 370 acres; population (1939), 23,973. Chief towns: Monaco (capital), La Condamine, Monte Carlo. During peacetime the main sources of revenue were the tourist traffic and the gambling concession at Monte Carlo. Budget (1939): 38,892,921 francs (franc averaged \$0.0251 for 1939). A ministry assisted by a Council of State administers the country under the authority of the Prince. Legislative power rests with the Prince and the national council of 12 members elected by universal suffrage for a four-year term. Ruler: Prince Louis II (succeeded June 26, 1922).

MONGOLIA. An extensive, vaguely defined territory occupying the central section of China's northern border, fronting on central Siberia.

According to the Russo-Chinese Treaty signed in Moscow on Aug. 14, 1945, China officially recognized the "independence" of her former province of Outer Mongolia. The action constituted a reversal of China's traditional policy concerning Mongolia since Soviet influence became predominant in that region beginning in 1917. While Chinese authority over her former Mongolian subjects had been nullified by the Russian occupation, the Chinese National Government kept the record clear by frequent diplomatic declarations asserting China's sovereignty over these territories. The Soviet Government concurred in these Chinese declarations of sovereignty over Mongolia until 1941 when Russia and Japan entered into a non-aggression pact, whereby Japan recognized Russia's control of Mongolia and Russia recognized Japan's control of Manchuria. Now China and Russia recognize the independence of Mongolia.

It was from Mongolia that the world conqueror, Genghis Khan emerged in 1211 A.D. first to occupy Peking and north China and it was his grandson,

Kublai Khan who became the first Mongol Emperor and founded the Yuan Dynasty of China in 1259. On the north, Mongolia borders on Russian Siberia and on the south and southwest it borders the Chinese provinces of Sinkiang and Kansu. On the east is Manchuria, while the southern part or Inner Mongolia has been cut up into the Chinese provinces of Chahar, Suiyuan and Ningsia. Territorially, Mongolia is an enormous area of about 1,875,000 square miles or more than half that of the United States.

The terms "Inner" and "Outer" as applied to the northern and southern sections of Mongolia did not come into general use on Chinese maps until after Soviet Russia's occupation of the northern or more arid section of the territory shortly after the Soviet Revolution in 1917. However, Russian influence in Mongolia increased rapidly after 1912, when Chinese political and economic influence became weakened as a result of the collapse of the ancient Chinese Empire and the confusion incidental to the ushering in of the Chinese Republic.

Tannu Tuva. Located on the northwestern border of Outer Mongolia, to the west of Lake Baikal is a republic of some 64,000 square miles, which is now shown on the maps as Tannu Tuva. Prior to 1911 it was known as the Altai Province of Northern Mongolia. Since the old Chinese Empire had always maintained a strong garrison there because of its strategic importance, the population has a decided Chinese complexion and speaks a variation of the Chinese "Mandarin" or Peking dialect. The area is rich in oil, copper, gold, iron and asbestos.

Since Russian colonists had settled in Tannu Tuva as early as 1870, Imperial Russia laid claim to the territory. However, nothing was done to disturb the Chinese administration until 1917 when Outer Mongolia declared its independence of China. Tannu Tuva then became an independent republic and in 1924 became a Russian protectorate. It is now practically a part of the Ussinsk district of the Russian Altai Province of Siberia.

China's Influence Wanes. First serious opposition to Chinese rule in Mongolia came in 1911, at the time of the collapse of the Manchu Empire when the Mongols declared their independence of Peking. However, the Chinese were able to maintain officials in the capital at Urga and a semblance of authority in the country until 1917. In that year, the year of the Russian Revolution, Mongolia became fighting ground in the Russian civil war between the Bolshevik Armies and the White forces. During the civil war period in Russia a White General, Baron Ungern von Sternberg, known as the "Mad Baron" led a force of Whites and Japanese renegades into Urga, capital of Outer Mongolia, where he established his headquarters. The Chinese sent a division of troops under the command of Gen. Hsu Hsih-Cheng in an attempt to re-establish Chinese authority. His troops were waylaid on the Gobi Desert and defeated by Mongolian horsemen led by Red Russian officers. The Russian Soviet forces and the Mongols then surrounded and defeated the forces of Baron von Sternberg at Urga and killed the Baron.

Russian Reforms Introduced. With the collapse of White Russian resistance in eastern Siberia and the withdrawal of Allied troops from the Russian Far East, the Soviets came into complete control of Outer Mongolia and its capital, Urga, which was renamed Ulan Bator. In 1924, with Soviet assistance, there was created at Ulan Bator the "Mongolian People's Revolutionary Government," operated on Soviet lines. The stranglehold which the Llama priests had maintained over the people was

broken and there was created a Mongolian Parliament based on universal suffrage of both sexes over 18 years of age. The parliament, known as the "Great Huraldan" meets once a year and chooses from its members 30 representatives who serve on an executive committee, which in turn appoints five of its members to a board which administers the country. The army and air forces are staffed by Soviet Army officers. Finances are controlled by the Mongolbank, jointly owned and controlled by the Mongol administration and the Soviet State Bank in Moscow.

One-Party Government. The government generally follows the Soviet model with a one-party dictatorship closely affiliated with the Soviet Communist Party. Practically all commerce and the few industries are state controlled and operate in close agreement with the state monopolies of the U.S.S.R. The police system was organized by Soviet technical experts and follows Russian lines. The Mongol Government has always maintained a mission in Moscow. Much progress has been made in reducing illiteracy and in extending medical services. There has been a considerable influx of Russians into the country, the Russian population in 1932 being about one-sixth of the total which was estimated at 540,000. The Chinese population was approximately 5,000.

Considerable progress has been made in teaching the Mongols agriculture and modern stock-raising, but most of the people are still nomadic herdsman. The last census of animal population gave the country 1,340,000 horses, 270,000 camels, 1,500,000 oxen and 10,600,000 sheep. Chief exports are hides, wool and furs, all of which are sold to the Russian State Monopoly through Moscow. There is some mining of gold and other metals. There is close telegraphic, air, and radio communication with Russia, but all communication between Outer Mongolia and China has been severed for many years. Air service is maintained between Ulan Bator, the capital, and Irkutsk on Lake Baikal and with Verkhneudinsk. A railway was under construction to connect Ulan Bator and Chita but work was stopped due to the war. A bus line was operated for a time between the capital and the Trans-Siberian Railway at Ulan Ude on Lake Baikal.

Inner Mongolia. After Japan completed occupation of Manchuria in 1931-32 she moved westward into Inner or Southern Mongolia, which has been cut up into Chinese provinces and has a population ranging from 5,000,000 to 7,000,000 Chinese, mainly farmers. First, however, the Japanese consolidated their position in Jehol province, north of Peking. Using Jehol as a base the Japanese first moved into Chahar, then westward into Suuiyuan, and finally into Ningsia as far as the western terminus of the Peking-Suuiyuan Railway.

Meng-Chiang Created. On November 22, 1937 the Japanese announced the formation of the Mongol puppet state of Meng-Chiang, or "Federated Council of the Mongol Border Land." Embraced within the puppet Mongol State were the Federated League of Mongolia (capital at Hohoto); the autonomous government of Northern Shansi, with the capital at Tatung; and the Federated Government of northern Chahar with its capital at Kalgan, strategic city on the old Mongolian trails radiating northward from Peking. The total area was roughly 200,000 square miles.

Japanese Buffer State. The Japanese announced their intention of extending the State of Meng-Chiang westward into China's most western province of Sinkiang, the Japanese object being to set up a state, extending entirely across north-central

Asia, which would serve as a buffer, entirely cutting off direct contact between China and Russia. As a result of Japan's threatened move into Sinkiang which the Russians regarded as their "sphere," the Soviet authorities moved a considerable number of troops into Sinkiang, which had the result of holding up the Japanese western advance at the town of Powtow.

Chinese Reds Between. The Chinese Communist Government at Yen'an in northern Shensi was thus between the Russian and Japanese military zones and, due to its close territorial contact with Soviet-controlled Outer Mongolia, took on a position of great strategic importance. Since the Japanese capitulation the Chinese Communists have moved eastward and occupied Inner Mongolia, including the strategic city of Kalgan.

In 1937-1938 the Japanese Army in Manchukuo moved into the Nomonhan area between the western border of Manchukuo and Outer Mongolia. The area is strategically important as it is level land on the direct route to Ulan Bator, capital of Outer Mongolia, through which an invading army from Manchuria would have to pass in order to occupy Mongolia and penetrate the Lake Baikal district in the heart of Siberia. Severe fighting developed between the Japanese Kwantung Army and the Soviet-led Mongols which lasted for several weeks, resulting in some 18,000 Japanese casualties, caused chiefly by Russian heavy tanks and planes. After the Japanese had convinced themselves that the Russians were determined to defend Outer Mongolia, the Japanese decided to make peace and later entered into a non-aggression pact wherein Japan recognized Russian sovereignty in Outer Mongolia and Russia recognized Japanese sovereignty in Manchuria. The Russians abrogated this treaty early in 1945.

Religion of Lamaism. The religion of the Mongols (also Tibetans) is Lamaism, a mixture of Buddhism, Sivaism, and native Indian Shamanistic practices. The "Eight-fold path of Buddhism" which resembles the tenets of Christianity, is largely obscured in Lamaism by primitive Shamanism, which teaches the doctrine of an unseen world peopled by gods, demons, and ancestral spirits, all of whom are controlled by the priests and medicinemen. Siva, deity of Hinduism, is supposed to symbolize the principle of destruction. The head of Lamaism is the Grand or Dalai Lama, who resides in Lhasa, capital of Tibet. There is said to be a striking resemblance between the practices of Lama priests and those of some medicine-men of early American Indian tribes.

Russian Reforms. Among the reforms introduced by the Soviets in Outer Mongolia was the abolition of the Lama Priesthood Hierarchy, which had long exercised a dominating and repressive influence over the people. The Russians effected this reform by drafting all able-bodied priests into the new Mongolian Army to serve under Russian Buriat officers. The pay-off, so far as the Lama priests were concerned, was an order permitting all soldiers to marry and bring up families, a privilege previously denied the priests. Previously every family was compelled to turn over to the Lamas its first-born son for training for the priesthood in the large Lamasaries or monasteries. Since the priests were not permitted to marry, the practice had a restrictive effect on the population which almost resulted in the extermination of the Mongol race. All families with only one son soon disappeared and since the Mongols led the hard lives of herdsman, the families were normally small and dwindled rapidly. It was said that Lamaism was introduced

into Mongolia by the Manchu Dynasty in China as a means of controlling and restricting the fierce Mongol horsemen whom the Manchus were unable to conquer. The Lama religious hierarchy, being composed of "first sons" and naturally the best blood in the country soon came to exercise political as well as religious influence. When the Japanese invaded Inner Mongolia they were assisted by the Lama priests, the Japanese having assured them they would be "restored" to power as soon as Japan had conquered the country.

JOHN B. POWELL.

MOTION PICTURES. War's end had its influence on the moving pictures and on those who make them, but as yet no appreciable effect is noticeable in the type of films exhibited in the theaters. There are two main reasons for this: the end came suddenly and left the producers with a large backlog of pictures made in war time and reflecting the feelings proper to that time, films expressing the problems of peace and victory could not be prepared for release so soon after the enemy capitulation.

One of the most distinguished movies of the year, however, stems from the defeat of Germany. *The True Glory* is a remarkable and moving summing-up of the invasion of Europe by the Allies from the west and the south, and the successful campaign waged by them that ended the European phase of the war. It is a significant film both because of its contents and the brilliant way in which it is edited and presented. The original reelage out of which the picture was made ran, it is said, to about ten million feet of film photographed by British and American units in the field. Garson Kanin and Carol Reed had the tremendous job of cutting it down to the length of an average feature picture. So well did they accomplish their task that the whole range of the many battle fronts is comprehended and the parts integrated in a rhythm of sight and sound that brings home its theme of valor and teamwork with stunning impact. *The True Glory* is noteworthy not only in being a great documentation of a far-flung campaign, but even more so in being a rich, human study of the men of all grades, nationalities and races who made the campaign possible. The sound track carries a commentary by the fighting men themselves, speaking in their own voices, cultivated or coarse, foreign, American or British, officer or enlisted man. This device of vocal variety enriches the largeness of the film's design and gives it a human universality all too rarely met in a film of any kind.

Another film of great popularity growing in part out of the war's conclusion is *The House on 92nd Street*. It tells the story of the work of the FBI in its battle on enemy espionage. The picture had not been released before the struggle with Japan ended. Thus its makers were free to revolve the plot around Nazi attempts to steal the secret of the atomic bomb. Obviously this was an afterthought, but the advantage taken of it gave the picture, the first to mention the dreadful contrivance, a sharp timeliness. The film might be called a fictionalized documentary because, like *The Confessions of a Nazi Spy* released several years ago, the plot is built out of factual material in the files of the FBI. It includes footage photographed by FBI men in their counter-espionage; it uses a commentary modelled after those used in *The March of Time* series; and, besides parts taken by professional actors, many of the people who play in it are FBI agents. To its rousing, realistic melodrama *The House on 92nd Street* adds a instructive picture of the complicated machinery and scientific

methods employed by the Bureau in the detection of crime.

In the field of out-and-out fiction films the types have changed little in the number made from the films of 1944. In those inspired by the war there has been a falling off in the quantity that hang some phase of the training of personnel on a stereotyped plot. The war films that have been released are based on action in the fighting and several of them have been unusually good. For example, *Objective Burma* is the enactment of a single raid into Jap-held territory in preparation for the grand invasion. In it the influence of the many battle films is easily discernible, in its use of realism and played-down star roles.

Several books about the war that made some stir in the world of popular letters found themselves in movie renderings. Such were *A Bell for Adano* by John Hershey, *They Were Expendable* by William L. White, *A Walk in the Sun* by Harry Brown, *God Is My Co-Pilot* by Robert L. Scott and *The Story of GI Joe* by Ernie Pyle. All of them made films with some claim to distinction. Of these Pyle's *The Story of GI Joe* is perhaps the most remarkable. Taking the point of view of a war correspondent who was deeply sympathetic with the foot soldier in his ordeal, the film concentrates on the men themselves rather than on action in battle. It is one of the sincerest tributes to the fellow who fought the war in all its extremes of filth, pain and savagery. As a work of cinematic art it stands a good chance to become a classic of its type.

In the realm of biographical pictures the year made a mark for numbers if not for any particular fidelity to the lives celebrated. The producers made a stab at a variety of personages, ranging from Chopin to Dillinger, not forgetting a boudoir comedy built around the mature years of Catherine the Great of Russia. *A Song to Remember*, a highly romantic work in Technicolor, treats of the struggles of Frederic Chopin, trying to choose between his art and his patriotism. In the end both are served and even a parallel between his times and our own is hinted. The film's chief claim is a handsome presentation of a sizable part of the piano works of the ill-fated Polish master. Although he was not named in the screen credits of the film, Jose Iturbi played the Chopin numbers. In *The Rhapsody in Blue* the career of the late George Gershwin suffers from the same tendency to manufacture facts and incidents, where none exist, to fatten the story line. A rich and comprehensive use of his music is made, however, with Oscar Levant playing the piano parts. Both films had a wide popular appeal. Others such as *The Dolly Sisters*, *Incendiary Blonde*, a synthetic life of Texas Guinan, *Captain Eddie*, a bow to Eddie Rickenbacker, and *The Great John L.*, something of a preachment against intemperance, had plenty of local color of eras to which possibly time has lent nostalgic appeal. The educational value of such films might easily be questioned.

Serious treatment of social problems, both those that are the aftermath of the war as well as those constant to life in our civilization, has not been overlooked by the movie makers. One such picture is *The Lost Weekend*. It was inspired by Charles R. Jackson's novel of an alcoholic's extended bout with liquor. It made a most astonishing picture, shying at little in its clinical approach. To have attempted such a film was felt in some quarters to be rather a gamble. As it turned out, the movie not only proved artistically sound in structure, direction and casting, but met with strong popular

support in the theater. Ray Milland's acting won him the National Board of Review's citation of the best performance of the year by an actor. Other films attacking themes of social importance were *The Valley of Decision*, a tale of struggle between capital and labor in Pennsylvania's steel industry towards the end of the last century; *A Tree Grows in Brooklyn*, a picture of slum life and the urge in human nature to transcend it; *The Southerner*, a strong treatment of tenant farming in the south. The latter two, besides the interest to be found in their contents, are films of artistic integrity and deep human feeling.

In its growing sense of being a responsible influence for social good, the movie industry did not blink at the problems arising out of the position of the returning veteran. *A Medal for Benny* made a mordant comment on the exploitation of the war hero. *Pride of the Marines* searches into the problems facing men who return from the battle fronts physically and spiritually hurt. And the hero of *I'll Be Seeing You* is a soldier, the victim of battle fatigue, trying to recover his place in the world at peace. Sometimes stuttering in the effort to give form and voice to these themes, nevertheless the films offer much to provoke serious thought on problems that affect a large part of the nation.

The year's contributions to the thrill fans include a fine picturization of Robert Louis Stevenson's story *The Body Snatcher* in which medical history and horror are combined with nice judgment. Another is *The Isle of the Dead*, a macabre tale of plague and superstition, laid in Greece during the war for its independence in 1912. Both were made on a modest budget and successfully achieve their purpose. On a much more elaborate scale of production and high priced talent, Alfred Hitchcock made *Spellbound*. It combined with his famous flair for tense adventure a treatment of psychoanalysis as the means of resolving his plot. Ingrid Bergman, whose variety of talent is such that she played this year a nun in *The Bells of St. Mary's* and an adventuress in *Saratoga Trunk*, in *Spellbound* appears triumphantly as a lady psychiatrist. Along the same line of digging into the vagaries of the human psyche, a small but interesting film that came to the screen by way of the radio is based on a story by Arch Oboler originally called "Alter Ego." The movie is called *Bewitched*. Oboler, who directs the film, introduces into it radio techniques in sound that do much to increase the picture's power to produce thrills for those who like to be frightened.

In the happier vein of entertainment films, the public was treated to a variety of comedies and musicals. Among the more delightful of these may be placed *Anchors Aweigh*, a merry jape of sailors on shore leave, with songs by Frank Sinatra and dances by Gene Kelly, in a top-flight Technicolor production; *The Clock*, a charming romance of a corporal on his last leave in New York and the girl who shows him the town; and *Where Do We Go From Here?* a fantastic adventure of a 4F who wants to become a marine, and his troubles with a none-too-reliable genie who wants to grant him his wish. All told, the year did rather well in this genre without producing anything likely to make cinematic history.

The significant films from abroad still continue to be concerned with the war. Films from Sweden, fortunate in its neutrality, are the chief exception. They add character, humor and warmheartedness to a delight in the good things of their country. A good example of their product is *Goransson's Son*, based on the same plot used by Charles Chaplin in

The Kid. Elsewhere the war held the spotlight and inspired such films in England as *The Way Ahead*, *The Silver Fleet* and *Colonel Blimp*, and in Switzerland *The Last Chance* and *Marie-Louise*. All were distinguished productions, comparing favorably with the best of the year in the United States.

ARTHUR BEACH.

MOTORBOATING. This country's wartime restrictions were not lifted early enough in the year to permit the return of power boat championship racing, but a few miscellaneous events were held late last summer. Only competition of any importance staged was that at Culver, Ind., where Wally Harper of Detroit, national Runabout titleholder; Dennis Martin of Jackson, Mich., and Leon Guthrie of Cleveland dominated the field.

A unique regatta was put on by GI veterans on Lake Garda in Italy. Piloting American assault boats and captured German counterparts powered with U. S. outboard motors the soldiers bounced and swished over 4,000 wild meters to the delight of thousands of screaming spectators. The winners were T/4 Raymond Sherwood of Staten Island; T/4 Ross Ivy of El Campo, Texas; T/5 Arie Breashears of Mustang, Okla., and Pvt. Joseph Shucoski of Plymouth, Pa.

One speedboat mark fell during the year, Gunnar Feleij setting a new mark for 1,000 meters when he averaged 53.69 knots at Stockholm. The previous standard of 51.20 was made by Car Wood, Jr. in 1939.

THOMAS V. HANEY.

MOTOR VEHICLES. The bright glow of hope for resumed motor vehicle production in volume that extended throughout the automotive industry when the war ended faded into disappointment with the closing days of 1945. Although the year was marked by a flood of war materiel output there was little offered in civilian automobiles.

Weapons for the military surged off automotive assembly lines at \$1,000,000 an hour rates through the early part of the year, but the output of cars and motor trucks failed to approach more than a trickle in the second half of last year.

The automotive industry's military production record stood out brightly, as motor companies in the aggregate were responsible for approximately one-fourth the nation's metallic war supplies.

The year also saw the automotive industry leading the campaign for adequate national plans for reconversion. The government freeze on reconversion planning, which set in at the times of Allied reverses during the Battle of the Bulge early in the winter, began to moderate by Spring. In April, top War Production Board officials met in Detroit with automotive manufacturers and their joint discussions laid the foundation for a series of government orders in ensuing weeks allowing pre-reconversion steps governing tooling, materials and plant construction.

In May, the Government established quotas under which the industry was granted permission to manufacture slightly less than 250,000 passenger cars in the last two quarters of the year, provided materials could be obtained and plant space freed without interfering with the war effort. Within the confines of the government policies, one manufacturer was able to get into limited production on July 3, while another manufacturer got underway late in August, but strikes soon shut off output at both companies. No substantial production was attained by any passenger car company in the year, even with the lifting of government quotas after

V-J Day, as strikes and shortages provided formidable obstacles to steady output.

Civilian motor truck production did somewhat better, as the physical reconversion problem in this branch of the industry was less severe, and as governmental authorizations had been granted earlier than in the passenger car field. Production fell short of the estimated potentials, however.

The automotive industry's total war and civilian output in the year amounted to \$6,500,000,000 of which 83 percent was for the military.

Despite war contract cutbacks and cancellations, most automotive companies were busily engaged in military production until Japan capitulated in August. One automotive company was favorably cited by the Secretary of War for its work on the atomic bomb project, while others had underway development work on propulsion, radar-controlled projectiles and other experimental projects. The industry was the chief source of supply for military vehicles and tanks, and was a considerable factor in the aircraft production picture, furnishing more than some eleven billion dollars of completed planes, aircraft sub-assemblies and engines during the war.

When the final records were compiled, it was found that the automotive industry had provided the United States and its Allies with a total production of \$28,970,000,000 in war materials since the beginning of the conflict. This included 2,600,000 military vehicles, 21,835 complete planes, 191,160 tanks, armored cars and other combat vehicles, 745,980 engines other than for military vehicles and 5,830,980 guns and artillery pieces.

With the end of the war, automotive companies tackled their reconversion problems with speed and vigor. Moving out government-owned tools and war materials, they swiftly rearranged plants for civilian production. Production blueprints, layout charts and process sheets had long been in preparation, so that every man assigned to automotive reconversion work knew exactly what to do. The manufacture of parts needed for passenger cars got under way in hundreds of plants throughout the nation, taking up the slack in unemployment that set in when war contracts were cancelled in wholesale fashion after V-J Day.

The civilian production curve was unsteady, however, throughout the second half of the year. A prolonged strike at the Kelsey Hayes plant in Detroit, resulting from protests of a small group of workers over a War Labor Board award upholding the discharge of three men, choked off the flow of essential parts needed by the Ford Motor Company. This strike so seriously held back output that it was almost autumn before the company could send each dealer a car, even though the company had gotten under way early in July. Hudson Motor Car Company was similarly affected by a strike of plant foremen, which greatly minimized the advantage the company had enjoyed in getting out its first cars before Labor Day. A twelve week strike at the Borg-Warner plant in Muncie, Indiana, deprived Studebaker, Willys-Overland and other companies of transmission gears, and brought their assembly lines to a standstill. Strikes in ball bearing and other supplier plants developed frequent shortages, keeping daily production at car and motor truck plants on a hit-or-miss basis through the fall months. In late October the strike at Libby-Owens-Ford and Pittsburgh Plate Glass Company, the two major glass producers, also seriously affected automobile production.

Though materials generally were available in quantities sufficient to keep up with the sparse

production, shortages developed from time to time, particularly in textiles, tin, castings and parts. At no time was the industry completely free of worries over scarce supplies.

As late as mid-October, Packard Motor Company reported that its new car bodies were lacking as many as nine parts. After overcoming these obstacles to production, the company finally was forced to close down in mid-December because of other shortages, these brought on, however, by supplier strikes.

Center of national attention during the latter part of the year was the strike at General Motors Corporation, first target of the United Automobile Workers (CIO) in the union's drive for a 30 percent wage increase. The union's policy, as announced at the UAW executive committee meeting in Flint in September, was to concentrate its strength against one automobile company at a time until its demands were met. In the meantime, the union avowed it would make every effort to keep competitor companies operating, to put the affected company at further disadvantage. Shortly after the Flint meeting Walter Reuther, UAW Vice President, announced that General Motors, largest company in the industry, was to be tackled first in the 30 percent wage drive.

The union called all its members out on strike on Nov. 21 completely eliminating for the remainder of the year any further production at the Chevrolet, Cadillac, Buick, Oldsmobile and Pontiac passenger car plants, all General Motors motor truck and bus manufacturing lines and General Motors parts divisions.

President Truman appointed a three man fact finding panel to look into the controversy, and hearings got under way in Washington in mid-December. General Motors withdrew from the hearings a few days after Christmas. General Motors and the union meanwhile had resumed negotiations, with the company offering a 13½-cent an hour wage increase on Dec. 7 which the union rejected. Negotiations were continuing as the year ended.

Another feature of labor-management bargaining was the demand by the Ford Motor Company of "company security" as a principle to be incorporated in its contract with the union. As the negotiations proceeded, Richard T. Leonard, head of UAW Ford division, indicated willingness of the union to have the company discharge strike leaders responsible for "wildcat" strikes and to fine other participants in such work stoppages. Bargaining over the extent of the wage increase to be granted went unresolved after the union turned down a proposed wage boost of 12.4 percent. Chrysler, too, was in the midst of union negotiations over the 30 percent demand, but without public limelight being focused to any extent on the deliberations.

In contrast to industry estimates cast shortly after V-J Day indicating a production of 500,000 passenger cars by the year's end, actually only 75,000 cars were produced, an average of 2.2 cars per dealer in the United States. During the year, 315,000 civilian motor trucks were manufactured and 16,500 buses.

All passenger car companies in the field when production was suspended on government order Feb. 10, 1942, were competing in the automobile industry in 1945. In addition, a newcomer, the Kaiser-Frazer Company, was getting ready to compete, having been formed in July for this purpose. The Willow Run plant rented from the Government, was announced as the scene of their future production efforts.

All cars shown publicly in 1945 bore close resemblance to the 1942 models, last to be produced before the war. Wartime restrictions on materials and on tooling and engineering work allowed little opportunity for radical changes in design.

Only 25,350,000 passenger cars were registered in 1945, a drop of over 4,100,000 from 1941 and 220,000 less than the figure for 1944.

Registration of motor trucks increased slightly in 1945 over 1944 but was lower than the 1941 figure. In 1945, 4,650,000 trucks were registered compared to 4,513,340 in 1944 and 4,876,054 in 1941.

Total motor user taxes showed a considerable decline since 1941. In 1945 taxes amounted to \$1,870,000,000, whereas in 1941 taxes were about \$2,150,000,000, another indication of the civilian motor vehicle supply. The figure for 1945 includes \$578,000,000 in special motor truck taxes, an increase of \$25,000,000 over the figure for 1941.

Meanwhile there was coordinated effort by the automotive industry, safety groups and highway planning groups to rush programs to make way for any new cars that might be produced and the flood of travel released by lifting the ban on gasoline. The American Association of Motor Vehicles Administrators, the Automotive Safety Foundation, National Safety Council, American Automobile Association and American Road Builders Association took active parts in this movement.

The American Association of Motor Vehicle Administrators, composed of State enforcement and highway officials from many sections of the country, urged that universal pedestrian control was much needed in cities while the rapid rehabilitation of millions of miles of routes in this country was stressed.

Late in the fall it was announced that the annual 500-miles Memorial Day race would be resumed at Indianapolis in 1946 after being suspended for the wartime duration. Capt. E. V. Rickenbacker, who began his colorful career as a race driver, termed this contest a motor vehicle test laboratory.

"All of the new automotive principles developed during World War II will see their counterparts on the Speedway before going into the car delivered to the public," he said. "The facts learned at the Indianapolis course and other tracks under American Automobile Association auspices will point the way for future trends in automobiles."

The tangible hope for new cars in the near future caused no abatement in the demand for used vehicles and it was forecast that this market would hold steady throughout 1946.

With more than 4,000,000 passenger units off the highways since 1941 there was a wide-spread demand for replacement. Used cars in good condition were eagerly sought, especially those in the low and medium price brackets. By the end of 1945 the supply of the vehicles in the latter classifications had dwindled to fractional proportions of the number demanded.

Of the 41,790 automobile dealers in business at the time of Pearl Harbor, 33,000 still were operating at the close of the war. After V-J Day there were thousands of applications received by virtually all companies for dealerships.

In analyzing the improvements which have been designed for new automobile production the Society of Automotive Engineers in member findings stressed the uses of synthetic rubber developed to meet wartime needs.

The results indicated that a wide scope of requirements can be met by this material for passenger automobiles, trucks and buses.

The reason for this confidence, in the opinion of a number of members of the society, was that the chemist can compound into the synthetic product the mechanical and physical characteristics he desires, whereas natural rubber has established specified limitations which, as yet, cannot be altered.

The general condition of the average car now in service was established by a nationwide survey conducted by the *New York Times* in August. More than 70 percent of those who replied emphasized urgent need for tire replacement. While 31 percent sought new cars immediately and 18 percent specified 1946 models with 25 percent content to await arrival of the 1947 models, the rest signified their intention to retain their present transport units to dates extending up to 1950.

In summarizing the immediate future of the automotive industry, based upon estimates late in the present year, it was pointed out that achievement of large scale production would make possible the employment of 569,000 workers in automobile manufacturing alone, aside from parts and accessory work, by June of 1946. These figures were calculated from a survey in November by the Civilian Production Administration. This would be only slightly below the first quarter of 1945, when war production was in full swing, and double the 1939 peacetime level.

BERT PIERCE.

MUNITIONS ASSIGNMENTS BOARD—United States and Great Britain. Created by the President of the United States and the Prime Minister of Great Britain on Jan. 26, 1942. The U.S. Section, working in close collaboration with the corresponding London organization, maintains full information of the entire munitions resources of Great Britain and the United States. Its duties relate to the assignment of munitions and the balancing of resources against stated requirements. Executive: John Y. York, Jr.

MUSIC. The signing of the peace was accompanied by few perceptible changes in the progress of musical life, other than the rituals that came in the normal course of events—e.g. a Toscanini Victory broadcast and similar tributes in fall orchestral programs and Prokofiev's *Ode on the End of War*. There was no decline in the number of recitals that had been encouraged during the war by increased financial resources for non-profit activities and increased public demand for entertainment. A serious problem, however, was that of artists abroad who were anxious to return here. As yet there was no one for Wagnerian roles to replace Kirsten Flagstad, the Norwegian soprano, who made every attempt to prove herself innocent of Quisling affiliations. Speculation as to her usefulness to opera at her age, or the possibility of her superb artistry extenuating for her politics, were brought to an end when her husband was officially put on the Washington list of those who would be refused entrance.

Creative Activity. Several substantial new compositions came out during the year, but no one of them asserted itself above the rest in the spectacular way that a new Shostakovich symphony might have done had one arrived. If they made no such onslaught upon public consciousness, it was not because of any less intrinsic worth. The Fifth Symphony of Serge Prokofiev (premiered by the Boston Symphony under Serge Koussevitzky) was received with mixed feelings partly because its inwardness is of a kind that does not transmit itself immediately over the footlights. Also, despite a few great inspirations in the work, one suspected that per-

haps the composer was not quite at home in the form of the symphony when he composed the work. The work was composed in a glassed-in verandah in Ivanoco, overlooking a pond where village kids swim and the gigantic farm which houses on its grounds some twenty composers every summer. After work these composers criticize one another's accomplishments, and on one occasion of their interchange of opinion, they advised Prokofieff that since he had not essayed the symphonic form for fifteen years, it was time he did something about it. Thus, a Fifth Symphony.

Among Americans, Aaron Copland received well deserved recognition for his score to Martha Graham's *Appalachian Spring*. The score won the Pulitzer Prize and the award of the New York Music Critics Circle. Several major orchestras included this lucid work on their opening programs of the fall season. Walter Piston also received his due for his Second Symphony, which won the Circle's prize in the symphonic category.

From Russia came reports of the première of the Shostakovich Ninth Symphony, which the composer had projected as a large work completing (with the Seventh and Eighth) a trilogy of the war. But the shadow of Beethoven's Ninth hung over him, and instead of attempting to compete with its seriousness, he wrote a relatively light work, less than a half-hour in length (as compared with the preceding works of well over an hour in length). Shostakovich regards this work as an interlude in the trilogy, rather than as its culminating section for which it had been planned.

Other reports from abroad related to the success of the large-scale opera (a rarity for our time) *Peter Grimes* by the young Englishman, Benjamin Britten. In France, Olivier Messiaen, a strongly mystic composer who had been a Nazi prisoner, was the rising star.

The eightieth birthday of Jan Sibelius called for concert celebrations, one of which, in Carnegie Hall, raised funds to be sent to him in Finland to distribute among young victims of the invasion, who were very much a concern to him. Through quirks of the copyright law and international difficulties created by the war, his many American performances yielded no return, and with internal difficulties what they were, he suffered considerable deprivation, it was revealed. Individual gifts from orchestras here, which had performed his works, helped alleviate this condition. Also among anniversaries, in this case of a composer no longer living, was the hundredth of the birth of Gabriel Fauré, marked by a festival at Harvard University, under the direction of the noted French pedagogue of composition, Nadia Boulanger.

A jolt to the conservative music world was the appointment of young William Schuman to the responsible position of president of the Juilliard School of Music. A composer in an idiom that many consider radical, he had entered music originally by way of Tin Pan Alley. In his music, boyish exuberance alternates with imposing seriousness, and in both veins he is closer to the *avant-garde* than anyone would expect to find at the head of a relatively old-guard institution. Judiciously, he did not bring about any radical change in 1945, but symptoms of his new position could be discerned in the festival of three concerts of Paul Hindemith's works presented in fitting recognition of this composer's fiftieth birthday, with the composer himself participating in the festivities.

The death, in the outskirts of New York City, of Béla Bartók, Hungary's leading composer, on Sept. 26, was a profound loss to the musical world.

Two other celebrated musical figures passed away: Pietro Mascagni (Rome, Aug. 2) and Jerome Kern (New York, Nov. 11).

Composers who figured prominently on orchestral programs included Igor Stravinsky, Darius Milhaud, Virgil Thomson, Randall Thompson, and, especially upon his visit from Brazil early in 1945, Heitor Villa-Lobos. Recipients of Guggenheim Fellowships in composition were Lukas Foss, Norman Dello Joio, Nicolas Lopatnikoff, Arthur Kreutz, Dai-Keong Lee, Samuel Barber, Elliott Carter, and Charles Faulkner Bryan.

George Antheil, who had made the front pages in the 'twenties with his *Ballet Mecanique* (a work imitating machine noises, and enlisting sixteen pianos in addition to the orchestra in its Carnegie Hall performance), attempted a come-back with a Fourth Symphony and other works in the offing, in a more sober vein, more in line with the massive Shostakovich vein with its war implications. Howard Hanson in the spring celebrated the 20th anniversary of the American Composers Concerts at the Eastman School of Music of the University of Rochester, in the course of which he has conducted some 900 orchestral works by 400 composers.

Orchestras and Conductors. A precarious matter in the relationship of composers and orchestras, that of performing fees, received attention at last. ASCAP, which has added many "serious" composers to its nucleus from the "popular" field, issued blanket licenses to 16 major symphony orchestras, giving them the privilege, for a lump sum each year, to perform anything in the ASCAP catalogue. A similar contract was signed by the American Composers Alliance and the Philharmonic-Symphony, and other orchestras were negotiating such contracts with ACA.

Symphony societies moved in other directions as well to aid the American composer and contemporary composers in general. There were, for example, the commissions, such as those set up by the Cleveland Orchestra and the Koussevitzky Foundation. A more spectacular gesture was that of the Detroit Symphony Orchestra, whose president, Henry H. Reichold, established a \$32,500 contest for the *Symphony of the Americas*. Composers throughout the Western Hemisphere have been invited to compete for this Reichold Music Award, with its first prize of \$25,000. (The nearest to a precedent for this was the RCA-Victor contest in 1929, but at that time, when the judges could not decide on any one person for a prize of this amount, it was split up among five finalists.)

An English commentator of musical events remarked on the increase in orchestral concerts as opposed to other musical events, not only in England, but in other parts of the world as well. For Great Britain, however, this was a serious matter, since it spelt the decline of the choral traditions which had hitherto been greater in England than anywhere else. New York felt the increase in orchestral music in a very apparent way. With the visit of the Detroit Symphony in January, and that of the Rochester Symphony in March, New York could chalk up the score of 6 visiting orchestras and two resident ones for the season 1944-'45. In addition to the two regular visitors (the Boston and Philadelphia) and the two new ones mentioned, there had been, earlier in the season, the orchestras of Washington, D.C., and Indianapolis. The resident orchestras included the long established Philharmonic-Symphony, in its 104th season, and the young New York City Symphony, in its second season. Established by Stokowski in 1944 under the aegis of the City Center of Music and Drama, the

City Symphony, in the fall of 1945, fell into the hands of young Leonard Bernstein who succeeded Stokowski (likewise contributing his services), when the latter was obsessed once again by his characteristic wanderlust and set out on a conducting tour of South America. Bernstein, with his talent for making headlines, attracted attention when he attacked the city for taking credit for the City Center without actually supporting it.

Opera. Statistics at the close of the 1944-'45 season of the Metropolitan Opera Association revealed that Mozart, with only three operas in the repertory, had been represented as many times during the season as Wagner with seven operas—namely, 18 times. Verdi with four popular operas, fell below this number. Among the season's memorable revivals were those of Beethoven's *Fidelio* (in English) and Wagner's *Die Meistersinger*. A poor English translation was partly responsible for the failure of the revival of Rimsky-Korsakoff's *The Golden Cockerel*.

Evening gowns, top hats, white ties became the norm again as the season opened in November, 1945. Another notable feature of the season was the fact that the Wagner cycle of the uncut *Ring of the Nibelung*, by now an annual ritual, was not being planned. The reason seemed to be that Lauritz Melchior, at 55 still the champion *Heldentenor*, would not make any blanket agreement to commit himself in advance to the company for any protracted period of time. He wanted to be free to come and go, and exploit further the success he had achieved in Hollywood.

For the more lyrical roles, like Lohengrin, Torsten Ralf was imported from Stockholm by the Metropolitan to relieve Melchior of these. Among artists returning from abroad to the company were Jussi Björling, who could not get back owing to wartime conditions, and Arthur Kent, baritone, who, in 1942, had been the first member of the Metropolitan Opera to serve in the armed forces. Noted with pleasure was the company's engagement of Dorothy Kirsten, soprano, who made her debut in the large opera house in *La Bohème*. Adding to the imposing list of conductors, who were so largely responsible for the improvement of the company in the last few years, the Metropolitan Opera Association invited Fritz Busch to join its roster. He had been musical director of the Glyndebourne Mozart Opera Festivals in England. The first of the season's revivals was Gounod's *Romeo et Juliette*, last given at the Metropolitan in 1938.

Recitalists. Pianists were particularly abundant, vying for favor in America's concert halls. In New York's three major concert auditoriums, about ten a week could be relied upon. Recitalists in general became so numerous that new concert hours had to be instituted to accommodate them in New York's downtown halls. In addition to the 5:30 hour on weekends, by now a usual thing, 11 A.M. and 11:30 P.M. were attempted one week in November.

By 1945 people seemed no longer surprised at the transgression of so-called "serious" artists upon the more widely publicized domains of cinema or popular music, or conversely, the appearance of night-club artists in the sanctums of the concert halls. The great Polish pianist, Artur Schnabel, earned \$85,000 for three days of work, performing Rachmaninoff's *Second Concerto* and some other works for the film, *Concerto*. (The fee is said to have been a record one for any Hollywood performer, musical or otherwise.) On the other side of the ledger was the appearance of Hazel Scott in Carnegie Hall and similar auditoriums in the

country. The celebrated colored night-club pianist not only played her usual swing arrangements and boogie-woogie, but devoted the first part of her program to works of Bach, Scarlatti, Chopin and others, in the original. Though she understood the "classics" better than one might expect of a swing-artist, she showed herself to have made no mistake in choosing swing as her major life-pursuit. On her tour she encountered the inevitable refusal from the D.A.R.'s Constitution Hall. Her Congressman husband requested Mrs. Truman, in protest, not to attend a D.A.R. function scheduled just after the refusal, but the First Lady did not think this the proper way to deal with the situation. Later, the American Guild of Musical Artists threatened that its entire membership would boycott the hall, unless Hazel Scott were granted a date there.

A good deal of publicity preceded Maggie Teyte's arrival. The somewhat special segment of music-lovers who collect French songs, looked forward to the British soprano as to an old friend. A cult quickly formed, and several recitals, no sooner announced, were sold out. Some loyal souls followed her from New York to Philadelphia or Washington, D.C., when she made her concert tour. Having coached with Debussy, she had undeniable insights into his style, but as in the case of any cult, there were those who found perfection in everything—which was scarcely to be expected from a voice first heard in its debut 40 years ago.

Recorded Music. The decision of the War Production Board to relax the restrictions on the sale of shellac resulted in a speed-up in the manufacturing activity of the recording companies which had been geared for action ever since the repeal (winter, 1944) of the Petrillo ban. By fall, 1945, the number of new releases per month returned to normal. In the meantime, RCA-Victor surprised the public with a new process of pressing records. This was in October when *Vinylite* made its debut. This is a red, transparent substance out of which records are made. It was introduced as "non-breakable under normal use" and allowing for a reduction in surface noise. The first album on these discs was *Till Eulenspiegel*, recorded by the Boston Symphony under the direction of Serge Koussevitzky. This new method was restricted to certain "de luxe," higher-priced albums, which would later be issued on regular wax discs at normal prices.

Musicography and Music Criticism. Paul Henry Lang, author of *Music in Western Civilization*, was appointed editor of the *Musical Quarterly*, succeeding Carl Engel, who died in 1944. In 1945, the musical world mourned the loss of three long-established figures in the world of music criticism: Oscar Thompson, music critic of the New York Sun; Leonard Lieblich, editor of *The Musical Courier*, and Pierre Key, editor of *Musical Digest*. Donald Francis Tovey's book on Beethoven was brought out posthumously by Hubert J. Foss, who edited the typewritten manuscript which had been only partially revised before the author's death. Other notable books on music, issued in 1945, were Alfred Einstein's *Mozart: his Character, his Work* and Nicolas Slonimsky's *Music of Latin America*. There seems to have been enough interest in the provocative and stimulating Sunday articles, and reviews of Virgil Thomson, music critic of the New York *Herald Tribune*, to gather some of them together in a book, *The Musical Scene*.

Ballet and Dance. A certain restless characterized the ballet world in 1945. As yet, there were only some minor reshufflings, but there were all sorts of rumors of major reshufflings to come. Change, it would seem, is very much in the nature

of ballet (which is nearer to theater these days than to the conservative concert world). Though ballet had achieved a pinnacle of success, its sponsors seemed to feel that this state of affairs would not continue without some new fillip.

Alicia Markova and Anton Dolin came back to the fold of Hurok's Ballet Theater, having had their taste of daily performances for large, mixed audiences on Broadway, while the dancing team was in the cast of Billy Rose's *Seven Lively Arts*. Hurok took advantage of Markova's increased popularity by forming a road company under her name, in which she would be assisted by Dolin and a small cast. This would complete the picture of Markova's re-creation of the Pavlova legend in our time. She still, however, would appear with Ballet Theater.

Leonide Massine formed a company to tour popular excerpts from ballet, as the name implies: Massine's Ballet Russe Highlights. With Fortune Gallo as its impresarios, the role of the company as ballet's equivalent to Gallo's former San Carlo Opera was emphasized. Rosella Hightower and Irina Baranova (the latter returning from musical comedy) were its two first-rate ballerinas.

In the summer the rumor spread abroad that Col. Wassily de Basil, director of the Original Ballet Russe, was trying to return to the United States after two and one-half years in South America. His very large repertory would be a serious threat to other American companies. But this competition still remained in the sphere of possibility when Ballet Russe and Ballet Theater finished their fall seasons in New York. Around this time, still other rumors were rampant. Hurok was said to be planning to drop Ballet Theater, salvaging only some of its elements in a coalition with de Basil. Rumor also had it that these two might be joined by the Marquis de Cuevas, whose Ballet International had lost so much during its first season that even his fortune could not sustain it.

Signs of disintegration and dissension in Ballet Theater's ranks were to be observed when the chief choreographer associated with the company, Anthony Tudor, left it at the close of the New York season. With him went Hugh Laing, the chief interpreter of the major male roles of his ballet compositions. Tudor's last novelty, *Undertow*, after its premiere during the previous spring, had turned out to be the saga of an inhibited, neurotic sex-murderer. Nostalgia and frustration had appeared as subject matter in his previous works, but the new twist proved flagrant to the shockable.

Sex also crept into the predominantly pure, classical repertory of Ballet Russe de Monte Carlo, when it brought Ruth Page's *Frankie and Johnny* (music by Jerome Moross) from Chicago. This work made news headlines because of certain contingencies. Commissioner Paul Moss had just banned the Broadway play, *Trio*, because of allusions to sexual inversion. As assistant to Mayor LaGuardia in the administration of the New York City Center, however, Moss put himself in the embarrassing position of sponsoring, in his own theater, at the same time as he banned *Trio*, a ballet with similar implications, in a scene in front of a house of ill repute.

The ballet was purged, but its artistic quality was not such as to warrant its being kept in the repertory anyway. Ballet Russe distinguished itself with the much nobler task of honoring George Balanchine, the great Russian choreographer, on the 25th anniversary of his career. With about half a dozen of his leading works in its repertory, Sergei Denham, the company's impresario, ungrudgingly

turned over his resources to Balanchine, who was given ample rehearsal time to work out his difficult ballets with casts that gave him sincere and loyal cooperation. A good deal of the company's success was, in fact, attributed to Balanchine's rehearsing of it in the perfect execution of minute details and line in his own works. The perfection the dancers approached in Balanchine's ballets was reflected in the traditional classics of the repertory. Also, the company's love and admiration for Balanchine served to unite it in a common belief, and with much more modest resources, poorer lighting, and an inferior theater, Ballet Russe, led by the incomparable Danilova, easily competed with Ballet Theater.

Having achieved a smash-hit in 1944 with the first effort (*Fancy Free*) of a young choreographer, Jerome Robbins, Hurok encouraged other young choreographers to produce in the hope that he might find another such hit. Michael Kidd's *On Stage!* (music by Norman Dello Joio) and *Grazi-ana* by John Taras were, however, only mildly successful.

Martha Graham, after many years of struggle, showed the world in a concrete way that she had definitely arrived and that she had firmly established the movement known as the "modern dance," when she was signed up for a tour by Hurok, who always puts his bets on sure-fire products.

ARTHUR V. BERGER.

NARCOTICS, Bureau of. A Bureau of the U.S. Department of the Treasury, established in 1930. Commissioner. Harry J. Anslinger.

NARCOTIC DRUGS CONTROL. The most important development of the year was the adoption in December of a Resolution by the Preparatory Commission of the United Nations Organization to set up an Opium Advisory Commission within the UNO. At the San Francisco Conference the American Delegation declared that specialized drug agencies operating under existing treaties should be brought into relation with the new UNO. Author of the Resolution was Dr. Victor Hoo Chi-Tsai, one of the Chinese delegates to the UNO Preparatory Commission meeting in London.

The machinery of the League of Nations has proved effective in controlling the movement of both licit and illicit drugs in international trade. Even during the war, the controls established for peacetime conditions remained in force in those areas of the world where the United Nations exercised administrative authority. The Permanent Central Opium Board on July 17, 1945, reported that it was at that time receiving information from 49 metropolitan countries and 66 colonies and territories. In normal years, about 1500 returns were made; those received in 1945 numbered over 1,050.

Thus it is seen that world-wide cooperation in one field at least is an accomplished fact, even despite the interference resulting from total war. Not only has no Government denounced any of the Conventions, but there have been some new accessions during war years. With the exception of the very few countries of the world which had not ratified them, and with a few exceptions in Eastern Europe, all the Governments of the United Nations throughout the world and almost all neutral Governments have carried on their domestic control and collaborated with the international drug control bodies.

The Government of the French Republic announced the adoption of the principle of absolute prohibition of the use of prepared opium in all

territories in the Far East under French control. The Dutch and British had in 1943 adopted a similar policy discontinuing government monopolies where opium was sold at small cost for non-medical purposes such as smoking. Thus is brought much nearer the ultimate goal in international progress—limitation of the planting of the opium poppy to supply only the medical and scientific needs of the world—which has been delayed by the continuance of the government monopolies for smoking opium. No total for raw opium could therefore be settled upon, although the amount—400 tons—necessary for manufacture into medicine and scientific uses was already known. The smoking-opium requirements were the unknown X of the equation. This X is now removed, as far as the Dutch, British, and French are concerned. Unfortunately, government opium shops in Burma will probably be reopened. The only other serious stumbling-blocks remaining now are India and Iran, which incidentally constitute the largest sources of supply for illicit drug smuggling to the United States. So far, Afghanistan is the only producing country which has complied with the Judd Resolution. It prohibited all planting of the opium poppy from March 21, 1945, declaring it was ready to take this important step “in the interest of international cooperation and because of humanitarian sentiment.”

Further International Agreement Possible. The way should now be open for an international agreement between the principal countries which grow and export the raw material—Turkey, Greece, Yugoslavia, Iran, and India—and the important drug-manufacturing countries.

National Control. India remained one of the three principal sources of supply for the illicit traffic in the United States. (Iran and Mexico are the others, in the order named. The Government of Mexico extended cooperation in combatting this illicit traffic during 1945, with some very good results, but the problem remains serious.) For instance, a Chinese seaman was able to purchase as much as 63 pounds of Indian opium by making the rounds of several hundred shops in Calcutta and obtaining in each shop the quantity permitted to be sold to each customer. This opium, purchased in India for about \$1,000, would have brought about \$75,000 in the illicit market in the United States to which it was destined. It was seized upon the arrival of the Chinese seaman in Baltimore, Maryland. Indian opium seizures are being made with increasing frequency, and in increasing amounts.

In the decade before the war, drug addiction had been reduced by as much as 60% in the United States. However, in spite of all the rigid shipping restrictions in force throughout the war period, smugglers were successful in bringing to American shores considerable quantities of opium. Increased vigilance will have to be maintained in order to prevent another wave of drug addiction, such as the one which followed the first world war, and to maintain the gains which have been made in recent years in international narcotic drug control work.

H. J. ANSLINGER.

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS. An independent Committee of the U.S. Government which coordinates and conducts aeronautical research. The principal research laboratories of the Government are the Langley Memorial Aeronautical Laboratory at Langley Field, Va., the Ames Aeronautical Laboratory at Moffett Field, Calif., and the Aircraft Engine Research Laboratory at Cleveland, Ohio. Chairman: Jerome C. Hunsaker.

NATIONAL ARCHIVES, The. An independent establishment of the U.S. Government, created in 1934, which accepts and preserves Government records. Archivist in 1945: Solon J. Buck.

NATIONAL BUREAU OF STANDARDS. This Bureau was established by act of Congress March 3, 1901. During the year 1945 it was made up of nine scientific and technical divisions, three divisions dealing with commercial standardization, a special division set up as a war measure and concerned wholly with military problems, and three divisions charged with the administration of internal affairs. The scientific and technical divisions, and those engaged in commercial standardization were: Electricity, Weights and Measures, Heat and Power, Optics, Chemistry, Mechanics and Sound, Organic and Fibrous Materials, Metallurgy, Clay and Silicate Products, Simplified Practice, Trade Standards and Codes and Specifications.

Dr. Lyman J. Briggs, Director of the Bureau since 1933, retired on November 5 after 49 years service to the Government. He was succeeded by Dr. E. U. Condon, who had been associate director of Westinghouse Research Laboratories since 1937. Five of the Bureau's division chiefs retired during the year: Henry W. Bearce, Weights and Measures; Hobart C. Dickinson, Heat and Power; Henry S. Rawdon, Metallurgy; Phaon H. Bates, Clay and Silicate Products; and I. J. Fairchild, Trade Standards. Douglas E. Parsons was appointed to succeed Mr. Bates; the other vacancies have not, as yet, been permanently filled.

This Bureau has continued to devote a large part of its time to work for the military agencies. Its regular appropriation of \$2,924,500, was supplemented by \$200,000 for special war research during the last 5 months of the year, and by transfers totaling approximately \$7,000,000 from the Army, Navy, National Defense Research Committee, National Advisory Committee for Aeronautics, and other agencies for projects in which they were interested.

The staff throughout the year has averaged about 2,000. Fifty-four research associates representing 14 national engineering societies and trade associations, were stationed in the laboratories. There is every indication that their number will increase as additional facilities can be released. The Research Associate Plan is an effective method of helping the smaller manufacturers and industrial groups that do not, themselves, possess the requisite laboratory facilities and research staff.

The Bureau's standard frequency radio broadcasts have been improved by announcements of actual times of day. The dissemination of information on ionosphere conditions and prediction of best frequencies to use between any two points has been one of the important services that the Bureau has rendered to the Army, Navy, and commercial organizations.

Storage batteries for aircraft use are being studied in a special laboratory recently completed. Airplane operating conditions are exceptionally severe, and previous tests have not been truly representative. An important part of the program involves substitutes for rubber as battery separators.

The ruling of precision theodolite circles has continued, and satisfactory progress has been made on the problem of transferring the rulings from a master circle to other circles by photographic processes. Tests by the Corps of Engineers show that these circles meet their requirements.

A large number of American-made chronometers have been tested. Their performance was such that

it was necessary to know the 24-hour interval to 0.01 second before they could be properly standardized. These American instruments were superior in almost every respect to the foreign-made chronometers, heretofore in universal use in this country.

The Bureau was represented at conferences on screw threads held in London and later in Ottawa. A cooperative research has been started by Canada, Great Britain, and the United States, which it is hoped will result in unifying the screw thread systems in use in these countries.

Basic information has been obtained on fuels that may be substituted for gasoline in automobile engines. This is of special importance to countries that do not possess petroleum resources and which have been obtaining gasoline on lend-lease. Tests of substances to be added in small quantities to gasoline to increase mileage, confirm previous conclusions that these additives are without any measurable effect.

Adsorbents, such as a bone char, are being studied with the financial support of several large companies in this country and in Canada. An extensive bibliography of the scientific literature on adsorbing materials has been published; it is believed to be the first of its kind in a field that is important to several major industries.

As the result of many experiments in the cutting of diamond dies used for drawing very fine wire, it was found that an electric arc at the contact between the diamond and the revolving lap, greatly increased the cutting rate. This, the only real improvement that has been made in cutting diamonds since the art was first practiced hundreds of years ago, is applicable to industrial and to ornamental diamonds and to diamond saws.

The distribution of standard chemical samples continues to be one of the Bureau's most direct services to industrial and Governmental laboratories. Samples of pure hydrocarbons and of paint pigments (color and tinting strength) are now included, as well as alloy steels for spectrographic analysis.

The Bureau has cooperated with the War Department in developing a color scheme and in selecting paints for the exterior and interior of general and convalescent hospitals. Use has been made of soft-toned, bright, cheerful pastel colors that create an atmosphere of restfulness. Standard color chips were prepared and sent to the various Service Commands, and a representative of the Bureau is visiting the hospitals to assist the post-engineers in carrying out the work.

A distant-reading indicating device has been designed and constructed for measuring the forces required to actuate the controls of an airplane. It is important that these forces be confined within rather narrow limits if performance is to be satisfactory. The instrument makes use of a spring interposed between the control and the pilot's grip which deflects proportionally to the force applied. An electrical transmitter and indicator are connected to the spring, so that the readings can be noted visually or recorded photographically at any convenient location.

A new 6 x 42 binocular, the body of which is made entirely of plastic, was designed in cooperation with the Army-Navy Munitions Board, and placed in production. Intended primarily for combat service, it is of the fixed focus, fixed interpupillary distance type, waterproof at a depth of 100 ft. It is resistant to fungi and corrosion, is compact, and weighs less than the standard binocular.

The mass spectrometer is being used with suc-

cess in the analysis of samples of liquid and gaseous organic materials particularly those that constitute the basis of synthetic rubber manufacture. A great deal of interest has been shown by industrial laboratories in the use of this instrument.

The installation of equipment in the rubber laboratory established by the Brazilian Government at the mouth of the Amazon has been completed, and the research program has been started under the supervision of a member of the Bureau's staff whose services were made available through the State Department. A tree has been developed that combines a strong root system, high rubber yield, and resistance to the leaf disease prevalent in South America. It is expected that this tree will be artificially cultivated, somewhat as is done in the Far East, but on smaller tracts of land, each of which will be leased to specially trained native families.

Means for preventing the deterioration of textiles and for producing special papers that will preserve goods during transit and storage in hot, damp locations have received special attention. The waterproofing of Army boots has been studied and a new protective treatment has been developed in cooperation with the Chemical Warfare Service, and the Office of the Quartermaster General.

The Bureau has examined many failures of welded ships, and it is evident that the presence of notches, because of faulty design or construction, is an important contributing factor. Steps must be taken to control either the design or material, or both. Changes in design have been made and now the problem is to insure the use of steels of low-notch sensitivity. The current research program calls for impact tests on a large number of specimens at various temperatures.

Outdoor exposure tests of metals have been continued at a seacoast site and have yielded important information on the corrosion resistance of aluminum, magnesium, and the light alloys used in aircraft construction. A set of full sized wings made of a magnesium alloy were among the specimens that have been subjected to tidewater attack in a marine atmosphere.

A start has been made on an investigation of "powder metallurgy"—the art of forming metal objects by compression and sintering of metal powders instead of by melting, casting, and machining to shape. An important characteristic of these powders is their rate of flow through a standard orifice; results of tests at the Bureau show that this varies with the kind of metal even among powders of approximately the same fineness. In other words, sieve tests are not a criterion of the rate of flow.

The ceramic coating developed at the Bureau for aircraft-engine exhaust stacks has been applied with success to "dry" and "wet" mufflers of boats and amphibious vehicles. Because of the rapid corrosion of the sheet metal from which these parts are made, they have to be replaced frequently, causing expense and loss of time. Very severe tests in the laboratory and in service show that the new coating has a high resistance to cracking and other damage even when heated to full operating temperature and then plunged into cold water.

A new furnace was designed and installed in the Bureau's optical glass plant. It is so constructed that temperatures can be equalized in much less time than in the ordinary type. This is accomplished by a continuous circulation of air by means of a powerful heat-resistant fan. Using this equipment it has been possible to anneal optical glass pressings in three days, instead of ten.

Since the end of the war and the abolition of the War Production Board, limitation orders governing

the use of materials have come to an end. Many of these orders included a simplified schedule as part of their requirements. Although the necessity for enforced simplification is now past, the industries concerned are in many cases anxious to retain the benefits of voluntary simplified practice. The Bureau is cooperating with all manufacturers who have shown an interest in this matter, notably with the structural steel group, the makers of dial pressure gages, and the asphalt industry.

A notable step in advance in the standardization of building materials and requirements was the adoption by all interested groups, of a voluntary commercial standard for prefabricated houses. This covers the structural strength of component parts, requirements for lighting and ventilation, and recommendations covering foundations, chimneys, heating, plumbing, insulation and electrical wiring.

The Code for Protection Against Lightning and the National Directory of Commodity Specifications have been revised and reprinted. The latter is the only complete, up-to-date compilation of standards and specifications having national recognition.

The results of the Bureau's work during the year (of a non-confidential nature) were made available through 111 publications (including papers in the Journal of Research) in the Bureau's own series and 58 articles in the technical press.

HUGH G. BOUTELL.

NATIONAL DEFENSE, Council of. A Council composed of the Secretaries of War, Navy, Interior, Agriculture, Commerce, and Labor, originally created by Act of Congress, Aug. 29, 1916. The Act authorized appointment of an Advisory Commission to the Council, composed of seven persons having specialized knowledge in certain fields. Such an Advisory Commission was appointed May 29, 1940, and constituted the beginning of the National Defense Program for World War II; its functions were subsequently absorbed by other agencies and are now performed by the War Production Board, Office of Price Administration, War Food Administration, and Office of Defense Transportation. See the articles on each of those agencies.

NATIONAL HOUSING AGENCY (NHA). The National Housing Agency was established by Executive Order on Feb. 24, 1942, to consolidate all nonfarm housing activities of the Federal Government. Policies are centered in the Office of the Administrator and operations are carried out through three major constituent units: The Federal Home Loan Bank Administration, the Federal Housing Administration, and the Federal Public Housing Authority.

With the end of the war and the rapid demobilization of our armed forces, the country faced an unprecedented housing shortage and the NHA immediately directed its full resources to stimulating the largest possible volume of home construction and to combatting inflationary real estate price trends.

The housing job ahead was one clearly calling for an all-out attack by industry, labor, and local, state, and federal government. Almost every city and town in the country had a housing shortage which had grown up over a period of years and resulted chiefly from two conditions: the lack of sufficient construction to meet increasing needs in prewar years, and the fact that, during the war, home construction had to be limited to shelter for migrating war workers so that all possible materials and manpower could go to the production

of weapons and equipment for our armed forces.

As more and more veterans returned to civilian life to look for homes or move in with friends or relatives, the nature and extent of the shortage became widely recognized.

NHA estimated that about 1,200,000 families were already living with others by Oct. 1, 1945, and that an additional 3,400,000 will need accommodations by Dec. 31, 1946. Approximately 2,900,000 of these will be families of veterans.

As the year ended President Truman appointed Wilson W. Wyatt, former Mayor of Louisville, Housing Expediter in the Office of War Mobilization and Reconversion to study the critical housing shortage and to recommend and execute a plan of action.

Subsequently, his powers greatly broadened by a delegation of authority from the OWMR, Mr. Wyatt was appointed Administrator of the National Housing Agency, and with approval of the President, announced the following program for 1946-1947:

The target for 1946: 1,200,000 homes started, 700,000 conventional houses; 250,000 permanent prefabricated houses; 250,000 temporary units.

The target for 1947: 1,500,000 homes started; 900,000 conventional houses; 600,000 permanent prefabricated houses.

To achieve the program, these emergency measures were recommended:

Preference for veterans in the rental or purchase of these homes.

Greatly expanded production of materials with Federal aid where needed

Greatly expanded labor force.

Deferment of non-essential construction

Rapid expansion of prefabrication.

Priorities and allocation of equipment and material.

Federal cooperation and assistance, where necessary, to develop building sites

Channel the largest part of materials into housing to sell for \$6,000 and less, or rent for \$50 a month and less

Curb inflation and continue rent control, establish ceiling prices on new and existing homes.

Federal insurance of mortgages on low cost homes up to 90 percent of value based on necessary current costs \$250,000,000 for re-use of temporary war housing, in addition to \$191,000,000 already available for that purpose.

Community participation paralleling Federal action through local emergency housing committees.

Reconstruction Finance Corporation to aid in financing production program; Federal funds to provide \$600,000,000 for premium payments for increased production of materials.

From the long-range point of view, the NHA estimated that the country needs 12½ million new dwellings in the next 10 years. Construction at this scale would mean an investment of from \$6 to \$7 billion annually and would provide more than 4,000,000 jobs, off and on the building site. To achieve these ends, and to move toward a goal of a decent home for every American family, proposals are pending in Congress to provide for the following:

1. New aids to private enterprise to encourage the production of housing for rent and sale in the "middle market."

2. Aids to communities to clear slums and blighted areas and prepare the land for redevelopment at economically sound costs.

3. Continued Federal aid to communities to provide low-rent public housing for families of very low incomes.

4. A broad program of technical and economic research aimed at aiding the building industry to reduce costs.

5. Aid to communities in analyzing their own housing problems and mapping out plans to meet the needs of all income groups.

At the conclusion of its war job, the NHA had carried out a program to provide shelter for some 4,000,000 migrating war workers and their families who comprised an estimated 9,000,000 persons.

About half these workers were taken care of in existing structures, largely through "Share Your Home" campaigns. Housing for the others had to be built.

Private financing was called upon to build when it could meet wartime needs and where there was reasonable assurance that there would be continued demand for the housing postwar. Public financing was used for the remainder. In all categories of war housing, private financing supplied more than a million dwelling units with an approximate private investment of nearly \$5 billions, a major share of it covered by FHA mortgage insurance. Public financing supplied over 830,000 units at a cost of \$2.6 billions.

Thus a core of the building industry was kept active in meeting imperative needs and in preparation for the postwar job. On Oct. 15, 1945, with the war ended, WPB Order L-41 (the war measure which restricted residential building to quotas established by NHA) was lifted.

As of Aug. 31, 1945, when the war housing program was closed, it stood as follows:

H-1 Housing for In-migrant War Workers

	Completed	Under Construction	To be Started ^a
Privately-financed	1,009,001	26,487	20,702
New permanent units	810,711	25,671	18,580
Converted units	198,290	816	2,122
Publicly-financed	832,241	22,004	4,978
New permanent dwellings	102,093	2,754	1,102
Demountable family dwellings	81,116	81	0
Temporary family dwellings	261,902	15,927	947
Converted family dwellings	49,370	6	427
Dormitory units	168,367	1,493	890
Stop-gap	79,383	1,743	1,612
Total H-1—Private and Public	1,841,242	48,491	25,680

H-2: Housing to Relieve General Congestion^b

Privately-financed dwellings	1,571	23,526	78,159
Publicly-financed dwellings	0	44	4,395
Total H-2 Private and Public	1,571	23,570	82,554

H-3^b Housing to Relieve Individual Hardship (all private):

New construction	12,900	41,800	16,746
Conversion Units	28,077	8,452	0
Total H-3	40,977	50,252	16,746
Grand Total—All War Housing—H-1, H-2, H-3	1,883,700	122,323	124,980

^a "To Be Started" is housing which was approved as of V-J Day; publicly financed housing in this category was terminated and privately-financed quotas which had not been taken by builders were withdrawn. Publicly financed war housing under construction was terminated where this was in the public interest. ^b Approximately 16,000 veterans who wished to build their own homes had H-3 priorities as of August 31.

Federal Public Housing Authority (FPHA). The agency is responsible for federally administered public housing programs. Toward the end of 1945, the FPHA had four principal functions:

1. The management of public war housing during the period of reconversion and demobilization for distressed families of veterans and servicemen, for civilian employees of the War and Navy Departments and of private industries completing war contracts, and for distressed families dislocated or displaced as a result of the war or demobilization.

2. The disposal of federally owned housing determined to be surplus to the above needs.

3. The extension of Federal aids to low-rent housing built before the war, and the conversion of

war housing to low-rent status under the U.S. Housing Act.

4. Extension of Federal aid on low-rent projects deferred by the war, as building labor and materials become available.

Before the outbreak of war interrupted construction of low-rent housing under the U. S. Housing Act, local housing authorities in 173 communities built 334 projects containing 105,600 units for low-income families formerly living in slum dwellings. The program thus far has been predominantly urban, but a small number of farm housing units were constructed under a rural program started shortly before the war.

The total development cost of the prewar low-rent projects was \$483,000,000. Although the FPHA is authorized to lend up to 90 percent of the development costs, it has actually supplied only two-thirds of the long-term financing, as a result of the ability of local housing authorities to sell bonds on the private market at an interest saving. All loans from the FPHA or private investors are being repaid in full, with interest, in accordance with established amortization plans.

To help keep rents within the means of low-income families, the FPHA makes an annual contribution, or subsidy, which for 1944 totalled \$8,600,000, or \$7.19 per dwelling unit per month. To June 30, 1945, Federal subsidy payments totalled \$43,409,000; this represents the entire cost to the Federal Government since the beginning of the low-rent program. In addition, the local community is required to make an annual contribution equivalent to at least one-fifth of the Federal contribution. This is normally done by exempting the projects from State and local taxes, as authorized by the U.S. Housing Act and State housing laws.

When the war began, only half of the program authorized under the U.S. Housing Act had been completed. Units under construction at that time were completed with the aid of priorities to house war workers, and are being turned back to the use of low-income families as conditions permit. Additional war housing projects were built under Public Law 671, which authorized the use of low-rent housing funds for war housing construction. Altogether low-rent housing funds provided 63,000 units for war workers. The 23,000 low-rent units scheduled in areas not requiring more war housing were deferred, pending availability of building labor and materials. As of Aug. 31, 1945, the total housing built or authorized under the United States Housing Act comprised 193,566 dwellings in 749 projects.

The major wartime function of FPHA was to provide publicly-financed housing for in-migrant war workers and their families; the FPHA being responsible for the construction and management of about four-fifths of the total provided. The remainder was provided by other agencies, principally the War and Navy Departments and the U.S. Maritime Commission. For the total public war housing program, some \$2,600,000,000 was made available, all from Congressional appropriations or loan authorizations except \$29,000,000 expended by the New York State Division of Housing.

From these funds some 864,000 accommodations were scheduled for families or single persons, and all but 32,000 units had been completed by Aug. 31, 1945. The war housing completed includes 585,000 family dwelling units, 168,000 dormitory units, and 79,000 trailers, portable shelters, and other forms of stop-gap housing. These figures include accommodations made available by re-use of trailers and temporary or demountable units

which were moved from one location to another.

Not counting units that may be transferred to the FPHA by the NHA or the Surplus Property Administration, the FPHA had some 656,000 units, completed or under construction contract, to dispose of. These include:

1. About 321,000 temporary units, unsuitable for long-term use as housing. These shall be removed within two years after the end of the emergency except where the Administrator, in consultation with communities, determines there is a longer need in connection with orderly demobilization.

2. About 181,000 permanent units, including 107,000 of standard construction, and 74,000 demountables which may be dismantled and re-erected at new locations. These will be sold to occupants or other private purchasers, unless transferred to other Federal agencies, or state and local governments.

3. Some 63,000 war housing family units, built with U. S. Housing Act low-rent funds, which will be turned to the use of low-income families.

4. A stock of 35,000 trailers, which will be disposed of by an appropriate agency designated by the Surplus Property Administration.

5. About 56,000 family and dormitory units converted from existing structures, mostly under 7-year leases, which will be returned to private owners at the expiration of the lease term or sooner if the owners purchase the unexpired lease term.

Federal Housing Administration (FHA). The Federal Housing Administration was established in June, 1934, by the National Housing Act "to encourage improvement in housing standards and conditions, to create a sound mortgage market, and to provide a system of mutual mortgage insurance" as part of the program to revive the construction industry and the home financing market. The FHA does not itself make loans but insures private lending institutions on residential loans meeting FHA conditions.

The FHA popularized the single, long-term amortizing mortgage bearing a low fixed interest rate. The maximum FHA interest rate today is 4½ percent plus the FHA insurance premium of ⅓ of 1 per cent, both calculated on annual outstanding balances. The premium is deposited in the Mutual Mortgage Insurance Fund.

Peacetime functions of the FHA are carried out under Titles I and II of the National Housing Act. Title VI was added as a war measure in March, 1941, to help provide private housing, temporarily meeting emergency war housing needs, but designed and built for permanence.

Title I provides for government insurance to lending institutions on loans for property improvements, alterations and repairs. Most of these loans are limited to a maximum amount of \$2,500 and a maximum term of 3 years, and are repaid through monthly installments.

Title II provides for insurance of mortgage loans ranging up to \$16,000 made by approved private lending institutions, and for monthly amortization of the loans over periods as long as 25 years.

Title VI was added to the National Housing Act specifically to assist in providing housing for war workers and a separate War Housing Insurance Fund was established. Insurance activity under this Title ended in August, 1945.

Most of FHA's operations during the war period were conducted under Title VI. Mortgages so insured were limited to a maximum of \$5,400 on a single-family house; \$7,500 on a two-family; \$9,500 on a three; and \$12,000 on a four, and could cover up to 90 per cent of FHA valuation.

Also, under the Title, FHA was authorized to insure mortgages on large-scale rental projects up to 90 percent of the appraised valuation but not to exceed \$5,000,000 for any one project.

Approximately 450,000 dwelling units for war workers were provided by mortgages insured under Title VI, for which the total insurance authorization was \$1,800,000,000.

From the start of the national emergency in July 1940 up to the surrender of Japan, approximately 750,000 new privately financed dwelling units were started under all FHA Titles.

The long-term program of the FHA has enabled more than 1,600,000 families to build, purchase, or refinance their homes, or to rent modern quarters. FHA insurance under Title II is now more than \$5,133,000,000 and FHA repair loans under Title I, exceeding more than 5,000,000 in number, aggregate \$1,903,733,000. As of Aug. 31, 1945, approximately \$2,090,689,150 of the mortgage loans and more than \$1,600,000,000 of the repair loans had been repaid through regular monthly payments or prepayments.

In addition to being self-supporting, the FHA has been able to declare two dividends on certain groups of mortgages under the participation provisions of the Mutual Mortgage Insurance Fund. The first disbursement was made to approximately 13,000 mortgagors in 18 groups who prepaid their mortgages in 1944. As of Jan. 1, 1945, equity balances had accumulated in 14 additional groups, and this second dividend will eventually be shared by nearly 142,000 mortgagors who still remained in these groups on that date.

Federal Home Loan Bank Administration (FHLBA) The Federal Home Loan Bank Administration directs the operations of the three agencies established to encourage home ownership and economical home financing, and to protect savings:

- (1) The Federal Home Loan Bank System was authorized in 1932. The System provides a nationwide home-mortgage credit reserve for thrift and home-financing institutions. Following the national pattern set up for commercial banks in the earlier inauguration of the Federal Reserve System, 12 regional Federal Home Loan Banks were organized, each to serve member home-financing institutions in its area by making both short and long term advances to meet their needs. Through the regional Banks funds may be shifted from areas of abundant credit to areas of scarcity. Since their establishment, they have advanced \$1,497,966,000 to their member institutions, of which \$112,450,000 was outstanding on Aug. 31, 1945.

Member institutions of the System totaled 3,699. Of these, 3,659 were savings and loan associations, cooperative banks and homestead associations, including 1,469 Federal Savings and Loan Associations for whom membership is mandatory; 25 mutual savings banks and 15 insurance companies were also members of the System. Assets of member institutions amounted to \$8,087,000,000. The System is self-supporting.

- (2) The Federal Savings and Loan Insurance Corporation was created in 1934 by Congress to provide an insurance program for investors in savings and loan associations and similar home financing institutions. Federal Savings and Loan Associations were required to be insured; insurance is optional for state chartered associations. The public confidence inspired by the fact that savings are so safeguarded has provided a steady flow of funds into insured institutions. About 4,300,000 investors in 2,475 savings and loan associations, with combined assets of approximately \$5,700,000,000,

are now protected by insurance up to \$5,000 each. The FSLIC has been self-supporting.

(3) The Home Owners' Loan Corporation, over a period of three years following its creation in 1933, refinanced delinquent mortgages on more than a million homes, providing low-interest, long-term loans which gave the owners a new chance to rehabilitate themselves. In these rescue operations, approximately \$3,093,000,000 was loaned to home owners, an amount increased to \$3,490,000,000 by later advances to borrowers and other disbursements by the Corporation.

Almost 74% of this investment has been liquidated through collections on the Corporation's loans and the sale of properties securing the mortgages which it was obliged to take over by foreclosure. Since 1936 the primary functions of the HOLC have been its collections and the general liquidation of its assets—as well as aiding its borrowers to meet their payments and retain their homes. Although the agency was forced to acquire a total of 198,127 houses by foreclosure, all but 663 had been sold by Aug 31, 1945.

On that date HOLC was collecting on 515,684 accounts. Of those, 391,732 were original borrowers and the rest were purchasers of acquired properties. A total of 488,109 borrowers and purchasers of HOLC houses had paid off their accounts in full. More than 84,000 borrowers were making monthly payments in amounts greater than called for by their contracts.

Notwithstanding the fact that HOLC made loans to home owners badly in arrears on their old mortgages, and high losses were originally anticipated, the operations during the twelve months ending last Sept. 30, resulted in a net income of more than \$20,000,000. This reduced the net deficit to \$86,000,000, which is less than 24% of the Corporation's total investment in loans and properties.

Liquidation of HOLC accounts to that date represents an acceleration of about 13% over amortization schedules. Unless something wholly unexpected develops to interfere with present progress, there is little doubt that liquidation will be completed within the time set by law, without loss to the Government.

JOHN B. BLANDFORD, JR.

NATIONAL INVENTORS COUNCIL. Created in August, 1940, by the Secretary of Commerce, the Council is a central clearing house for inventions and suggestions relating to the national security and welfare. Since its creation, more than 200,000 inventions have been carefully examined and evaluated, a surprisingly large number of which have proved meritorious and useful.

Dr. Charles F. Kettering, President of the General Motors Research Corporation, is Chairman and other members include eminent scientists, inventors, Government officials, and business men well versed in the application of new devices, all of whom serve without compensation. The Council staff includes a corps of competent engineers and technical experts—each a specialist in his own field.

CHARLES F. KETTERING.

NATIONAL LABOR RELATIONS BOARD (NLRB). In the last fiscal year, as in the preceding 12 months, more election cases were filed with the National Labor Relations Board than in any single year of the Board's history. Of 9,737 cases brought to the Board's attention, 7,310, or over three-fourths of them, sought Board resolution of questions concerning union representation; the remaining 2,427,

or less than 25 percent, involved allegations of unfair labor practices.

The Board is entrusted with administration of the National Labor Relations Act, often referred to as the Wagner Act. Signed into law by President Roosevelt on July 5, 1935, it guarantees American workers the right to organize and bargain collectively.

In passing upon this legislation Congress sought to prevent strikes over the issues of union recognition and anti-union discrimination. Further, it sought to promote industrial peace and equality of bargaining power through encouragement of collective bargaining. In essence, the Act sets forth a public policy to encourage collective bargaining free from employer interference, restraint or coercion.

In order to achieve results consistent with this national policy, the Board was given two functions: (1) to conduct secret ballot elections to determine freely chosen representatives of employees for collective bargaining purposes; and (2) to eliminate and remedy those practices by employers which discriminate against employees in any manner because of union membership or activity.

These illegal practices are set forth in Section 8 of the Act which enumerates five types of employer conduct that deny, abridge or interfere with employees' right to bargain collectively. Specifically, under this section employers may not:

(1) Interfere, restrain or coerce employees in their self-organizational rights;

(2) dominate, interfere with, or support the formation or administration of any labor organization;

(3) discriminate in any manner in regard to hire or tenure of employment in order to discourage or encourage membership in a union;

(4) discriminate against an employee for filing charges or giving testimony under the Act; and

(5) refuse to bargain collectively with the duly chosen representatives of his employees.

In the ten years that the Act has been on the statute books, 77,231 cases have been filed with the Board. Of these, 37,306 involved unfair labor practice charges and 39,925 concerned questions of representation.

The Board endorses and stresses the use of informal procedures for the achievement of results consistent with public policy. Thus, of the total 77,231 cases handled, 62,712, or 81.2 percent of them, were disposed of informally—without the necessity of hearings, decisions or subsequent court litigation. Taken separately, over 90 percent of the unfair labor practice cases handled were so settled; of the representation cases, 72.6 percent were so adjusted.

The magnitude of the Board's election job and American workers' interest in it, can best be seen by the fact that in the ten years of the Board's existence, over 6,000,000 workers have gone to the polls to vote in Board-conducted elections. Approximately 24,000 such elections were held during that period.

In 20,000 elections a majority of employees voted for a union; in 9,545 polls the C.I.O. was successful in obtaining representation rights; A.F.L. affiliates scored in 7,945; unaffiliated unions were chosen in 2,510; and no union was selected in the remaining 3,850 balloting.

During the fiscal year, 893,758 workers voted in the 4,919 elections held by the Board. The C.I.O. was victor in 1,898 of these polls; A.F.L. unions won 1,620; unaffiliated unions were chosen in 560; and no union was selected in the remaining 841 elections.

The returning serviceman, when viewed through the operations of the Act, is considered in the same light as a civilian worker; he is treated as an employee who temporarily finds himself in his country's uniform and who, upon his return to his bench, will be entitled to the same rights as he always enjoyed.

Inasmuch as the Board's basic functions impinge upon the serviceman, the Board has had occasion to hand down rulings saying: Individuals who are in uniform do not cease to be employees of their employer before they entered the armed forces. Employees who have been discriminatorily discharged prior to their military service must be offered full reinstatement upon their return to civilian status. Employees who are in the armed forces, whenever administratively feasible, will be permitted to cast their ballots in elections for the determination of representatives to act as bargaining agents. Whenever a labor organization is certified by the Board as exclusive bargaining agent, the certification is made subject to review when a sufficient number of employees have returned from military service.

Before the Board can certify a representative it must first ascertain which employees comprise an appropriate unit for collective bargaining purposes. Under the Act, the employer, craft, plant unit or subdivision thereof may be found appropriate. An appropriate unit also may be composed of employees of one plant, several plants, or all the plants of one employer. Similarly, employees of one or more crafts or departments may form an appropriate unit.

Among the more important factors considered by the Board in arriving at a unit determination are the following: the history, extent and type of organization of employees; the history of their collective bargaining; the history, extent and type of organization of employees in other plants of the same employer, or other employers in the same industry; the skill, wages, work and working conditions of the employees; the desires of the employees; eligibility of the employees for membership in the union or unions involved; and the relationship between the unit or units proposed and the employer's organization, management, and operation.

Only 6,900 of the 24,000 elections held during the ten-year period were conducted pursuant to orders of the Board; the remainder, or 72 percent of all elections, were based and conducted on the complete agreement and mutual arrangement of the parties.

In November 1945, with 2,100 bargaining elections on its docket, the Board adopted a new policy to expedite the disposition of reconversion representation issues. This policy, in the form of an addition to the Board's current Rules and Regulations, makes it possible for representation elections to be conducted in certain types of cases without awaiting a formal direction of election by the Board in Washington; any necessary hearings are held after the conduct of the election by the Board's agents. The Board's purpose was to remove quickly any simple questions of majority representation from the area of industrial strife since many of the cases pending before it are and will continue to be tied in with industrial reconversion efforts. In making the change the Board noted: To the extent that these representation questions are promptly answered, that the employer knows with whom he is to bargain and that employees realize that they can designate representatives to settle shop problems, to that extent will the Board have furthered reconversion to full-time output of civilian goods.

To correct unfair labor practices the Board is authorized to issue cease and desist orders and to take such affirmative action, including reinstatement with or without pay, as will effectuate the policies of the Act. Of the 11,000 formal decisions issued in the decade—comprising over 60 bound volumes—2,600 of them concerned employer unfair labor practices. To remedy illegal practices the Board ordered the reinstatement of 300,000 employees, 30,000 of whom received back pay. These compensatory pay awards totalled \$9,000,000. Over 2,000 company unions were ordered disestablished. In 5,000 cases collective bargaining was ordered, while in 7,000 cases notices of compliance with Board decisions were directed to be posted. These posted notices informed employees that they were free to engage in collective activity without interference, as guaranteed by the Act.

Decisions and orders of the Board are not self-enforceable. There are no penalties or fines. Either the company or the Board may petition the appropriate Circuit Court of Appeals for enforcement. Following this, either party may petition the Supreme Court for review. It is only after a court has upheld a Board order and an employer has refused to comply that he may be held in contempt of court and subject to court penalties.

As of Oct. 1, over 600 Board cases had been litigated in the various Circuit Courts of Appeals and in the Supreme Court. In the Circuit Courts, 343 of these were upheld in full; 78 were set aside; and 167 were modified. Of the 55 that reached the Supreme Court, Board orders were enforced in full in 52 cases; in only 2, or less than four percent, were Board orders set aside.

An additional duty was given the Board by Congress during 1943. This was the conduct of strike votes in accordance with Section 8 of the War Labor Disputes Act. From the date of the passage of this Act, June 25, 1943, up to Dec. 1, 1945, a total of 4,260 dispute notices had been filed. Of these, 2,293 were withdrawn before the end of the 30-day period stipulated by the statute. Strike polls were conducted by the Board in 1,306 instances, and on Dec. 1, 1945, 606 such cases were pending before the Board.

In November alone, 578 of these strike petitions were filed. This influx of strike vote petitions caused the Board to protest to Congress that the conduct of such votes had become administratively impossible. The Board pointed out that its work of conducting N.L.R.A. elections, intimately tied in with orderly reconversion of industry to peacetime production, was being neglected because of the time and money required for the handling of War Labor Dispute Act cases, and called upon Congress to repeal the section requiring the Board to conduct the strike votes.

PAUL M. HERZOG.

NATIONAL MEDIATION BOARD (NMB). A nonpartisan independent Board of the U.S. Government, created by amendment of the Railway Labor Act in 1934, whose duty is to mediate differences between the railroads, the express and Pullman companies, and the airlines on the one hand and their employees on the other. Chairman in 1945: Harry H. Schwartz.

NATIONAL PARKS AND MONUMENTS. With the end of hostilities and the lifting of gasoline rationing, the National Parks again took a prominent place in the vacation plans of the traveling American public. After the end of the Japanese fighting, travel to many of the parks doubled within a few days and

the Labor Day week-end travel was about back to prewar totals. With this increase, travel for the 1945 travel year (ending September 30, 1945) totaled around ten million, compared to a prewar high of twenty-one million in 1941. During war years, park travel dropped to a low of approximately seven million. Of the ten million this year, over two million were men and women of the American armed forces in uniform.

The parks remain relatively undamaged by the demands of war. Proposed exploitation of timber, minerals, and grazing lands within the parks proved to be of negligible value to the war effort and the parks enter the peacetime years undisturbed by any major war uses. The lease by the United States Navy of the Ahwahnee Hotel in Yosemite National Park, Calif., as a Convalescent Hospital was terminated in December. Many hundreds of battle-weary veterans, principally from the South Pacific, found rest and relief from war strain in the inspiration and recreation of Yosemite National Park.

The Statue of Liberty, N. Y., was relighted on May 8, 1945, after a blackout lasting over three years. This symbol of Democracy again stands as a welcome to the men returning from the battlefields of Europe.

Fort Frederica National Monument, Ga., was added to the National Park System on August 30, 1945. This site contains the ruins of an old fort established for military protection by the Georgia colonists against the Spanish colony in Florida. The total number of national park areas was 169 at the end of the year. These include:

National Parks	27
National Historical Parks	4
National Monuments	85
National Military Parks	11
National Battlefield Parks	1
National Battlefield Sites	7
National Historic Sites	10
National Memorials	9
National Cemeteries	11
National Parkways	3
National Capital Parks	1

Protection for park forests was emphasized during war years. Unusually dry forest conditions and severe dry lightning storms during late August of 1945 threatened the northwestern parks with the worst fire season in many years. However, prompt action kept total acreage burned well below the ten-year average in spite of critical shortages of manpower. In general, man-caused fires decreased in numbers during war years.

Artificial feeding of bears in Yellowstone National Park, Wyo.-Idaho-Mont., and Yosemite National Park, Calif., was eliminated during the year as a move to further portray the wildlife of the parks in a wholly natural setting. This move will stop unnatural concentrations of the bear populations, will permit them to fend for themselves for food, and should reduce the number of accidents to visitors from unwise familiarity with the park bears. This bear-feeding problem has become particularly acute in Yellowstone which has an extensive grizzly bear population.

More than 300 acres of virgin timber in Mount Rainier National Park, Wash., was purchased for an addition to the park. This timber was in imminent danger of being logged. Its purchase is another step forward in the land program of the National Park Service which hopes for the ultimate acquisition of all of the more than 600,000 acres of non-federal land within the boundaries of National Park System areas.

Because funds for park administration and maintenance were cut sharply during the war years, only minimum maintenance of park roads, trails, buildings, campgrounds, and other facilities was possible. The Service now faces the task of rebuilding and repairing these facilities to take care of greatly increased numbers of visitors. Many of the visitors in 1945 did not find the accommodations available that are ordinarily provided and that will be offered as funds and manpower permit. Most of the hotels and cabin camps in the parks were closed for the duration, and putting them in shape again is a major project facing the concessioners who operate them.

During the year, inquiries from Wales, England, Scotland, Brazil, and South Africa indicated a continuing interest in national park developments in other lands. At the United Nations Conference in San Francisco special memorial services were held in Muir Woods National Monument, Calif., for the late President Franklin Delano Roosevelt.

NEWTON B. DRURY.

NATIONAL WAR FUND. In the Fall the National War Fund issued its third and final nation-wide appeal to meet the needs of its 19 member agencies. The goal, like that for 1944, was \$115,000,000.

The War Fund was organized in 1943 as a federation of the leading war-related appeals, with the exception of the Red Cross, for providing comforts, hospitality and entertainment for our armed forces and merchant marine, recreational and educational materials for prisoners of war, and supplementary emergency war relief to the people of our Allies and to wartime refugees from Axis oppression.

The War Fund's joint appeal was presented to the American public through community war funds and war chests, linked in Community Chest cities with campaigns for established local services for health and welfare. Forty-three thousand individual soliciting committees in cities, towns and townships took active part in raising funds for the federated appeal.

The National War Fund was a voluntary war agency. Although not government-controlled or financed, it was government-endorsed, and it operated in accord with the President's War Relief Control Board.

It is estimated that National War Fund member agencies extended their services in 1944 to 69,806,900 people in 125 different countries and major geographical areas. Of this total 17,643,000 were children and 5,921,000 were refugees. It is further reported that in 1944 these agencies supplied 6,350,000 pounds of food, 27,962,000 pounds of clothing and \$4,343,200 worth of medical supplies, drugs and equipment.

Member Agencies: USO (United Service Organizations), United Seamen's Service, War Prisoners Aid, Philippine War Relief, Belgian War Relief Society, United China Relief, American Relief for Czechoslovakia, American Relief for France, Greek War Relief Association, American Relief for Holland, American Relief for Italy, United Lithuanian Relief Fund, Friends of Luxembourg, American Relief for Norway, American Relief for Poland, United Yugoslav Relief Fund, American Field Service, Refugee Relief Trustees, U.S. Committee for the Care of European Children.

Officers: President, Winthrop W. Aldrich; Secretary, Ralph Hayes; Treasurer, Gordon S. Rentschler; Vice-presidents, Jean B. Adoue, Jr., Prescott S. Bush, Robert M. Hanes, Francis P. Matthews, Walter Rothschild, Edward L. Ryerson, Robert G. Sproul, and Henry M. Wriston; Chairman of

Budget Committee, Gerard Swope; Chairman, Public Relations, Thomas D'Arcy Brophy; General Manager, Harold J. Seymour. Headquarters: 46 Cedar Street, New York 5, N. Y.

NATIONAL WAR LABOR BOARD. The year 1945 saw the operations of the National War Labor Board reach full and fairly stable maturity during the first six months but, following the August victory over Japan, brought a gradual liquidation of the Board's activities and final termination of the agency on Dec. 31 under Executive Order 9672. The executive order ended a four-year program for peaceable settlement of labor-management disputes by government arbitration, but transferred the modified wage stabilization program—second of the WLB's two wartime assignments—to a newly-created National Wage Stabilization Board.

Probably the major action of the Board during the initial six months of the year, while the agency was active, was a report of Public Members to the President on Feb. 20 recommending that no change be made in the Little Steel Formula, a basic wage stabilization device under which general wage increases were permitted for groups of employees up to a limit of 15 percent above the level of Jan. 1, 1941, to offset advances in the cost of living. Liberalization of the rule had been requested by both the A.F.L. and the C.I.O., and separate comments objecting to the findings of the Public Members were submitted by both the A.F.L. and C.I.O. members of the Board. Industry members agreed with the recommendation but objected to the further recommendation that war-caused innovations in industrial practices be made postwar norms. Basic conclusions of the report were that upward revision of the formula would bring about a new round of general wage increases such as threatened the stability of the economy in 1942, and that wage controls should be ended only as a part of a broad economic plan to assure high levels of civilian production and employment in the post-war economy.

Other significant developments of the early part of the year included the Board's decision of Feb. 21 ordering 55-cent minimum wages for the New England and Southern textile industries to correct substandards of living and calling, as well, for "balanced and properly aligned" wage structures; the Feb. 21 denial of general wage increases to packinghouse workers (but with an order for the parties to negotiate well balanced wage structures), and a July 21 decision holding the War Labor Disputes Act superior to any state law in connection with a contested maintenance of membership clause in a union contract with a St. Joe, Florida, paper company case. A court test of the power of the President to seize a non-war establishment (Montgomery Ward & Company) for defiance of Board order resulted in a decision of the Chicago District Federal Court on Jan. 27, holding such seizure illegal, but the decision was reversed by a U.S. Circuit Court of Appeals on June 8. (A final adjudication of this legal point appeared unlikely in view of subsequent refusal of the U.S. Supreme Court to review the case on the ground that the issue was "moot" because seizure of the property had been terminated).

With the collapse of Japan on Aug. 14 and sudden shift of economic trends, there started, however, a succession of changes in the disputes and wage stabilization programs and in the War Labor Board itself. In his statement of Aug. 16 the President announced a relaxation of wage controls consistent with a loosening of the labor market and

also a program to terminate the WLB as a disputes-settling agency "as soon after conclusion of the forthcoming industry-labor-conference as the orderly disposition of the work of the Board, and the provision of the War Labor Disputes Act permit; and after facilities have been provided to take care of the wage stabilization functions under the Act of Oct. 2, 1942."

Two days later, on Aug. 18, the broad plans announced by the President were more carefully defined in Executive Order 9599 directing the War Labor Board to continue wage controls with such modifications as were necessary to prevent either inflation or deflation, and to move as rapidly as possible toward the removal of controls and toward the restoration of collective bargaining. In the field of wage stabilization, the Board acted promptly with adoption of General Order 40, which for the first time since October, 1942, permitted employers to make wage increases not affecting prices without prior approval of the Board. An exception was made in the case of the building and construction industry, in which controls were continued on the former footing. In the field of industrial relations, the Board urged the parties in some 3,000 pending disputes to renew collective bargaining and to settle the issues without further recourse to the Government. New dispute cases were accepted by the Board and its agencies only upon joint agreement of the parties to accept any decision as "final and binding."

On Sept. 19, Executive Order 9617 was issued transferring the WLB, and certain other war agencies, to the Department of Labor. This, however, did not tangibly alter the character of the Board inasmuch as the agency was preserved as an entity within the Department of Labor, with autonomy over its powers, personnel, funds and other administrative operations. Likewise, correspondence with the Secretary of Labor established that the Board was to retain full autonomy over its policies and decisions.

The Board's termination program was speeded again in October with announcement that, effective Oct. 22, the Board would not hear the merits of any new disputes cases and would accept such cases only for the purpose of appointing an arbitrator to hear and decide the issues. In the meantime, the Board fixed Jan. 1, 1946, as its final termination date and laid plans for disposing of all pending matters before that date. The month also brought the issuance of Executive Order 9651 amending Executive Order 9599 and setting up standards for approval of wage increases which may be used by employers as a basis for obtaining higher prices.

In November, as requested by the President, the Board moved toward providing facilities for continuance of the wage stabilization program by setting up within the framework of the Board a six-member Wage Stabilization Division of tripartite composition to rule upon voluntary wage applications involving "price relief," to rule upon all wage decrease cases (all wage decreases continued to require prior approval of the Board) and to deal with other phases of the program. The wage-price policies to be applied by the Division and related government agencies were set forth in greater detail on Dec. 5 by Stabilization Administrator John C. Collet and the practical application of these policies was spelled out fully in a series of regulations issued by the Division on Dec. 27. These regulations explained that with the exception of certain increases in the basic steel industry and the building and construction industry, "the

general rule is established that wage or salary increases may be made lawfully in any amount and at any time without the approval of the National War Labor Board." With the two exceptions, the sole effect of approval of a wage increase application was to permit the increase to be used as a basis for higher prices, rents or costs of goods furnished to the Government. Denial of an application, however, did not prevent the applicant from placing into effect immediately all or any part of the proposed increase, and did not mean that such increase was unlawful under the wage stabilization laws or that it was disapproved by the Government. Conforming to the policies of the executive orders and the stabilization administrator, the regulations permitted approval of "cost of living" wage increase for groups of employees whose average straight-time hourly earnings had not risen 33 percent above the level of 1941; wage increases to correct inequities between plants by comparison of rates within a plant with the average rates currently prevailing in an industry or area, and wage increases necessary to overcome manpower shortages in certain "bottleneck" industries which constituted interference with the national reconversion program.

The final step in the liquidation of the Board came on Dec. 31, 1945, when Executive Order 9672 terminated the agency and created a National Wage Stabilization Board to carry on the wage control functions. Physically, the members and staff of the new Board were drawn from those of the previously-operating Wage Stabilization Division and the expired WLB. W. Willard Wirtz, chairman of the Division, was named chairman of the NWSB.

With termination of the War Labor Board, it becomes possible to review its work and to determine the extent to which it achieved its two objectives of minimizing wartime disputes and of stabilizing the general wage levels to combat inflation.

In the first of these tasks, the National Board and its agencies from Jan. 12, 1942, to Aug. 18, 1945, dealt with 17,807 disputes which were deemed threatening to the war effort and issued decisions, normally involving many issues, affecting approximately 12,300,000 employees. Probably the most significant yardstick of the agency's effectiveness is the fact that the percentage of all working time lost by strikes and lockouts from Pearl Harbor until V-J Day was $\frac{1}{400}$ of one percent as compared with $\frac{27}{100}$ of one percent in the five peacetime years 1935-39. In other words, operation of the no-strike program reduced the loss of production time during the war to approximately one-third of its peacetime levels. The comparative speed in termination of stoppages is demonstrated by the following table showing the average duration of strikes in the prewar and wartime years: 1939, 23 days; 1940, 21 days; 1941, 18 days; 1942, 12 days; 1943, five days; 1944, 5½ days.

In accordance with the voluntary no-strike, no-lockout pledge of labor and industry, compliance with the Board's decisions came about by voluntary acceptance, rather than by compulsion, in most cases. Of the 17,807 disputes handled up to V-J Day, 50 were turned over to other agencies to compel compliance. In 40 cases seizure was ordered by the President and in four cases economic sanctions were applied by the Office of Economic Stabilization. Six ultimately were settled without action. In 26 of the disputes unions were in defiance; in 23 cases employers were in defiance and in one case both sides defied the order of the Board.

While any attempt to measure the effectiveness of the wage stabilization program as administered by the Board involves many intangibles, some conclusions may be drawn by a comparison of the average level of urban wage rates before and after inauguration of the program. In the 21-month period from Jan. 1, 1941, to Oct. 2, 1942, urban wage rates in manufacturing industries rose 17 percent or at a rate of 0.8 percent a month. In the 34-month period from Oct. 3, 1942, to Aug. 18, 1945, the increase was 13.6 percent or at a rate of 0.4 percent a month. Thus the advance of the inflationary spiral was reduced by one-half its former rate of progress. It was estimated further that of the total rise of 13.4 percent during the period of control, about one-third could be ascribed to immediate increases granted by the WLB, with most of the remainder resulting from increased output of incentive workers, more liberal management policies in the matter of merit increases and other factors outside the jurisdiction of the agency.

While the basic wage rates were being held in line, however, total wages were permitted to advance so that the increase in straight-time hourly earnings (adjusted to discount increases caused by shift of workers to higher-paid industries) amounted to 40.5 percent from Jan. 1, 1941, to July, 1945. In the same period the cost of living advanced by an estimated 33 percent. Thus, it appeared that real hourly wages—the amount of wage paid in a job for an hour of work—were slightly higher at the close of the war than on Jan. 1, 1941.

During the entire period of wage stabilization, from Oct. 3, 1942 to Aug. 17, 1945, the National Board and its agencies ruled upon 412,543 voluntary requests for wage adjustments and allowed increases (in original decisions before appeals) in whole or in part in 353,749 instances, affecting the earnings of 23,233,000 workers. Of these workers, 10,916,000 received immediate increases in basic wage rates averaging 6.1 cents an hour, while the remaining 12,317,000 received either non-immediate increases in basic wage rates or such other benefits as paid vacations, shift differentials and the like. In settlement of disputes, 1,915,000 workers received an average immediate increase in basic wage rates of 5.6 cents an hour, while another 3,577,000 workers received other benefits affecting their wages. (Statistics in disputes cover three-fourth sample of cases.)

Distribution of increases appeared to vary little between the union groups, and between the union and non-union groups. In voluntary cases, the average immediate increases approved by the Board were distributed as follows: AFL unions, 5.3 cents an hour; CIO unions, 4.8 cents an hour; independent unions, 4.7 cents an hour; unorganized employees, 6.5 cents an hour. In dispute cases, the averages were: AFL unions, 5.8 cents an hour; CIO unions 5.3 cents an hour; independent unions, 6 cents an hour.

JOHN A. STUART.

NAVAL PROGRESS. The surrender of Germany and Japan eliminated two major aggressors from the world's sea lanes. Together, the powerful U.S. and British Commonwealth navies now hold undisputed sway over the world's sea highways. The high cost of modern fighting ships, and the technological and scientific establishment needed to maintain an efficient Navy and Fleet Air Arm in postwar years, should serve to deter any smaller power from undertaking naval construction that

will challenge the hegemony now held by the U.S.-British sea alliance. The surviving warships of Germany and Japan have been seized by the United Nations, all their submarines sunk, and the serviceable surface ships divided among the victor nations. These powers will not be permitted to possess any naval establishment whatever in postwar years. As for the Italian Navy, it is slated to be cut to just a coastal defense force, with some ships divided among the United Nations.

Radar—U-Boat Nemesis. Early in the war the anti-U-boat campaign was a continuous pitched battle of radar against anti-radar devices. The Nazis developed a receiver to pick up Radar ASV signals and were successful for a time in ship sinkings. When Allied ships and planes instituted an improved type of anti-submarine radar (microwave ASV set), U-boat losses increased sharply. These losses helped destroy the German confidence in their U-boats until they found one of these new sets in a fallen British plane. Then the deadly battle commenced again. New ingenious Nazi devices included "radar coatings" which were painted on protruding U-boat parts, such as periscopes or conning towers. Effective counter-measures were developed by the combined efforts of U.S. and Britain, however. By the fall of 1944 the Nazi Navy had decided the only way for a sub to live was not to come up at all. They invented an air-tube they called "Schnorkel," which enabled a U-boat to breathe and to run its Diesels while submerged. The Allies too were ready with new devices, such as the electric Sonobuoy. With this, U-boats were being sent to the bottom at the rate of nearly one a day.

Radar revolutionized fleet tactics, making possible a new flexibility in surface-ship warfare, particularly in darkness. Without it even the overwhelming naval might which drove the Japs from the high seas and brought American forces within the shadow of Tokyo would have had much rougher going. Radar also came to the aid of the British by helping to cripple the Italian fleet. This magic weapon was developed so that optical control of firing of all weapons except pistol and rifle had been practically abandoned. (Rocket improvement also led to small rocket ships that could fire in a few seconds a broadside of metal greater than that of the newest battleships. Radar permitted these ships to come close in-shore, rockets being ineffective at long range.)

The Sonobuoy. One of the secret devices which helped crush the Nazi U-boat campaign in the latter part of the war was an instrument called the Sonobuoy, a small radio-equipped buoy which, when dropped by plane near a submarine, broadcast a faithful record of the sub's underwater progress. The Nazis never overcame the Sonobuoys. When a U-boat was located several Sonobuoys were dropped by parachute in the area by a plane. A small carrier-based fighter plane could carry dozens of them. Thereafter, every throb of the U-boat's engines would be continuously broadcast to the plane or to a surface ship over the horizon many miles away. The Sonobuoys also recorded the disintegration of U-boats when caught by depth charges, bombs, or the rocket device called Hedgehog which later replaced the depth charges.

The Hedgehog. Known technically as the Mark 10 and 11 anti-submarine projectors, the Hedgehogs were an improvement over depth charges which they replaced in the fall of 1942. Designed by the British, the Mark 10 operated on the rocket principle, the device mounting 24 projectiles, arranged in a bank. Designed to keep level despite the yaw

and roll of the sea, the Hedgehog hurls its charges from the bow of the attacking ship in an elliptical pattern above the calculated position of the submarine. After being hurled from a distance up to 200 yards, they exploded on contact only, instead of on the principle that detonates the depth charge. Thus, when an attacker hears an underwater explosion, he knows a hit has been scored. The charges were thrown within 2.5 seconds, and in 1.8 seconds by the improved Mark 11. The Mark 11 was placed in production in the U.S. in January, 1944. Both types are credited with a major role in the sinking of approximately 300 U-boats.

The Wakeless Torpedo. Early in the war, it was discovered that British and U.S. ships were being sunk by invisible U-boat torpedoes. Electrically driven, this new type left no telltale wake. Within 4 months after Pearl Harbor, the U.S. Navy had experimental electric torpedoes under development. The first successful wakeless type, the Mark 18, was fired by a U.S. sub in September, 1943; by the fall of 1944 it was standard equipment on all submarines. These electrically propelled torpedoes accounted for some 300 Jap merchant ships and naval vessels, with a total of 1,000,000 tons, including the 30,000-ton battleship *Kongo*.

The Atom Bomb and Future Navies. The atom bomb has brought the question, "Will navies become obsolete in the atomic age of the future?" We have little doubt concerning the effectiveness of an atomic bomb against a battleship or a fleet of warships in close formation, but the effect in an underwater blast, the only kind that can really damage a submarine, is questionable. And what future enemy would care to use an atom bomb against even a group of submarines which can be replaced faster than the costly bomb? The submarine is destined for a new role in the atomic age. In fact, in enlarged form it may become a fleet's most powerful arm. We can visualize a 5,000-ton undersea boat carrying 6 or more planes, each plane armed with rocket guns. Rockets may even be installed in the sub's launching tubes and torpedoes removed. Submarines of the future may be much faster, can be equipped with the "schnorkel breathing mast" and have far greater range than present types. Atomic bombs themselves may be launched from a submarine or carried from the sub by one of its planes. Add the increased range of the future submarine to the range of the planes it will carry, and you get a possible picture of these undersea craft launching surprise atomic or rocket attacks far offshore, instead of having to close in on targets. There is also the possibility that torpedoes which some submarines may still carry may be equipped with atomic warheads to blast an enemy harbor (as a prelude to invasion). A distinct advantage of the submarine in launching an atomic bomb is the element of surprise. Any long range bomber plane can be detected by enemy radar and perhaps shot down more than 200 miles from its target; but a sub, crossing the ocean submerged (and hence not subject to radar detection), can surface at night for just a few minutes near an enemy shore, and launch an atomic bomb by rocket or small plane. Because the coasts of United States and the British Isles are as highly vulnerable to this type of attack as any potential enemy coasts are, submarine, anti-submarine, and even amphibious warfare research and experiments must continue unabated by both countries.

American naval laboratories are now working on pilotless robot jet-propelled planes that will carry atom bombs to be launched from the decks of our huge fleet of fast carriers. With such planes the

Navy's air power would be world dominant. There would still be light surface fighting ships and fast carriers. But surface warships have become auxiliaries to air power.

Naval Intelligence. The ability to crack the Jap Navy's code gave the U.S. and British navies the key to victory in the Pacific. The code-cracking operations were conducted at four main points. Chief of these were the U.S.N. intelligence set-ups operating at Pearl Harbor and in Gen. MacArthur's staff at Hollandia, while the British collaborated with check points and information-gathering posts at Colombo, Ceylon, and Melbourne, Australia. The terrific punishment inflicted on the Jap merchant marine by our submarine fleet is also traceable to the code penetration. The Jap supply routes had been learned and even the sailing times of some convoys. The crushing defeat of superior Jap naval forces in the Battles of Coral Sea and Midway, and the complete destruction of the 32-ship Bismarck Sea convoy led the Japs to suspect something was amiss; they adopted the practice of sending out occasional dummy operational orders, giving false dispositions and unintended moves. Behind the code cracking still lies an unrevealed secret—the espionage system that gave the U.S. Navy the progress of Japan's naval building plans, and the size of various task forces they had to meet.

United States. At the end of the War the U.S. Navy found itself the greatest sea-air power the world has known. The fleet exceeded all the other world's navies combined. So large had it grown it required 3,389,000 men, plus 484,000 in the Marine Corps and another 173,000 in the Coast Guard, to man its ships, planes, training stations and bases. (In 1941 the Navy had 244,606 officers and men.) In December, 1941, there were 17 battleships, 7 aircraft carriers, 1 escort carrier, 18 heavy and 19 light cruisers, 172 destroyers and 113 submarines, a total of 347 combatant ships. Including ships of all types, the fleet totalled 7,695 vessels. It had grown to only 12,000 ships when the attack on Guadalcanal was mounted in August, 1942. It had grown to 55,229 by July, 1944, when Guam was invaded, was up to 73,852 in January, 1945, at Luzon, and over 100,000 ships when the beaches of Okinawa were stormed in April. This huge total included over 1,300 combat ships, and over 10,292 auxiliary types, the balance being chiefly landing craft. Total tonnage of this vast armada was well above 12,000,000.

The Navy lost 696 vessels of all types during the war, as a result of enemy action and all other causes. Losses by types were: battleships, 2; aircraft carriers, 5; escort carriers, 6; heavy cruisers, 7; light cruisers, 3; destroyers, 71; destroyer escorts, 11; submarines, 52; minelayers, 3; minesweepers, 24; sub-chasers, 18; gunboats, 12; Coast Guard vessels, 15; seaplane tenders, 3; MTB's, 69; landing ships (LST, LSM, LCT, LCI, LCS, etc.), 144; tugs, 10; tankers, 6; troop transports, 21; district patrol craft, 36; miscellaneous district craft, 152; cargo vessels, 4 and miscellaneous auxiliaries, 22. The Navy's war casualties in personnel (as reported Nov. 1, 1945) were: 56,261 killed; 80,260 wounded; 8,908 missing; 710 prisoners, a total of 146,139. These figures include the Marine Corps (which suffered over 72,000 of the total casualties) and Coast Guard.

During the war and including combat ships still under construction late in 1945, the Navy built 9 battleships, 3 battlecruisers, 3 giant carriers, 24 fleet carriers, 11 light carriers, 117 escort carriers (of which 38 went to Britain), 22 heavy and 42 light cruisers, 344-odd destroyers, over 455 de-

stroyer escorts (with 92 going to our Allies), and 203 submarines, a total of over 1,233 combatant vessels. (Some 98 frigates built by the Maritime Commission and later manned by the Coast Guard are not included in these figures). The combat ship strength of the U.S. Fleet late in 1945, including ships nearing completion, was:

Type	Number	Tonnage
Battleships	24	840,600
Battlecruisers	3	82,500
Aircraft Carriers (CVB)	3	135,000
Aircraft Carriers (CV)	27	717,500
Aircraft Carriers (CVL)	10	117,000
Aircraft Carriers (CVE)	80	737,000
Heavy Cruisers	33	421,200
Light Cruisers	57	513,450
Destroyers	445	850,000
Destroyer Escorts	363	468,000
Submarines	263	367,750
Total	1,308	5,250,000

Postwar Plans. The Navy contemplates a peacetime fleet of 6,084 naval vessels of all types, and an air force of 3,731 combat planes on active duty. Combat ships will number 1,082 of 4,688,500 tons, or only 226 less than peak strength. The auxiliary fleet will number 5,002 vessels, a cut of over half from its present strength of 10,292 ships. To man the peacetime fleet 500,000 enlisted men and 58,000 officers for the Navy, and 100,000 enlisted men and 8,000 officers for the Marine Corps, would be required. Compared with the prewar carrier strength of 7 ships and 6,000 naval pilots, the peacetime fleet will need around 18,000 pilots and 23 carriers in commission. Cost of the Navy's peacetime establishment (excluding the Coast Guard which is being returned to the Treasury Dept.) would approximate some \$3,525,000,000 annually. The 1,082 combat ships planned leaves the Navy with 226 surplus warships on hand which are to be disposed of, preserved as historic relics or scrapped and stricken from the Navy Register. The ships are: battleships *Arkansas*, *New York*, *Texas*, *Nevada*, *Pennsylvania* and *Mississippi* (the latter to replace *Wyoming* as a training ship); the aircraft carriers *Saratoga*, *Ranger* and *Enterprise*; the damaged escort carrier *Sangamon*; the battle-damaged heavy cruisers *Pensacola* and *Salt Lake City*; the 9 "Omaha" class light cruisers; 78 destroyers and 63 destroyer escorts, mostly worn out in service, and 64-odd submarines. On Jan. 24, 1946, the Navy revealed the following warships are to be used in the Bikini Atoll Bomb Test in May and July: Battleships *Arkansas*, *New York*, *Nevada*, *Pennsylvania* and *Nagato* (Jap); Heavy cruisers *Pensacola*, *Salt Lake City* and *Prinz Eugen* (German); Light cruiser *Sakawa* (Jap); Aircraft Carriers *Saratoga* and *Independence*; destroyers *Mayrant*, *Trippe*, *Stack*, *Rhind*, *Bagley*, *Helm*, *R. Talbot*, *Mugford*, *Lamson*, *Flusser*, *Conyngham*, *Smith*, *Anderson*, *Mustin*, *Wainwright* and *Hughes*; subs *Skipjack*, *Tuna*, *Parche*, *Dentuda*, *Searaven*, *Skate*, *Pilotfish* and *Apogon*. The 1,082 combatant ships and 5,002 auxiliary ships of the Navy's peacetime fleet (as shown in accompanying table) will be organized into active (to be kept fully manned and ready for instant action), ready reserve (reduced commission but ready for action on short notice), and laid up reserve (decommissioned on a caretaker basis but available in an emergency).

For special branches of the service, see AERONAUTICS; COAST GUARD; PHOTOGRAPHY; also, COMBINED CHIEFS OF STAFF. For outlays on the U.S. Navy, see PUBLIC FINANCE; UNITED STATES under

U.S. NAVY'S POSTWAR FLEET
(As proposed Oct. 30, 1945)

Combatants		Ready Re- serve	Laid- up Re- serve	Total
Types	Active			
Battleships ^a	5	6	7	18
Battlecruisers	3	0	0	3
Aircraft Carriers (CVB)	3	0	0	3
Aircraft Carriers (CV)	7	4	13	24
Aircraft Carriers (CVL)	0	1	9	10
Aircraft Carriers (CVE)	10	11	58	79
Cruisers, Heavy	8	9	14	31
Cruisers, Light	20	9	19	48
Destroyers	135	40	192	367
Destroyer escorts	36	4	260	300
Submarines	70	20	109	199
Total	297	104	681	1,082
Auxiliaries		Ready Re- serve	Laid- up Re- serve	Total
Types	Active			
Mine vessels	229	22	154	405
Patrol vessels	254	61	86	401
Landing craft	252	358	610	1,220
Attack and high speed trans- ports and cargo vessels	76	66	114	256
Other auxiliaries	418	22	235	675
District craft	146	1,680	219	2,045
Total	1,375	2,209	1,418	5,002
Grand total combatants and auxiliaries	1,672	2,313	2,099	6,084

^a The Navy contemplates maintaining the five 45,000-ton *Iowas* in active service, the six 35,000-ton *North Carolina* classes in ready reserve, and the 3 *Marylands*, the two *Californias* and 2 of the *New Mexico* class in laid-up reserve.

The total combatant tonnage of the post war fleet is as follows: 18 battleships of 665,000 tons, 3 battle-cruisers of 82,500-ton, 3 big carriers of 135,000-ton, 24 fleet carriers of 650,000-ton; 10 light carriers of 117,000-ton; 79 escort carriers of 725,000-ton; 31 heavy cruisers of 403,000-ton, 48 light cruisers of 450,000-ton; 367 destroyers of 760,000-ton; 300 destroyer escort of 387,000-ton and 199 subs of 314,000-ton, a grand total of 1,082 combat ships of a combined 4,688,500-ton.

NOTE: The Navy announced on Feb. 7, 1946, revised figures for its postwar combat fleet, as follows ACTIVE: 4 battleships (with *Kentucky* remaining uncompleted through 1946); 3 CVB's; 10 CV's; 13 CVE's; 8 CA's; 20 CL's; 135 DD's; 36 DE's and 90 subs, a total of 319 Ready Reserve: 6 battleships; 4 CV's and 1 CVL; 9 heavy and 9 light cruisers; 40 destroyers and 4 DE's, a total of 73. The balance of 687 ships will be in laid-up reserve and will include the 3 new *Alaska* class battle-cruisers and the uncompleted heavy cruisers *Salem*, *Dallas*, *Newport News* of the *Des Moines* class. On Jan 30, 1946, the Navy cancelled 1 unnamed heavy cruiser of the *Des Moines* class, the CA 141.

Appropriations. For production of material, see BUSINESS REVIEW; WAR PRODUCTION BOARD; also, CONTRACT SETTLEMENT, OFFICE OF. For personnel, see SELECTIVE SERVICE SYSTEM and topics listed under ARMED FORCES.

Foreign Navies. Australia. At the end of the war the R.A.N. consisted of 4 cruisers, the 8-inch gunned *Australia* and *Shropshire* (latter acquired from Royal Navy); the 6-inch gunned *Hobart* and *Adelaide*; 11 destroyers; 2 sloops; over 12 frigates and some 55 fleet minesweepers plus numerous auxiliaries. The Navy had a personnel of some 35,000 officers and men. At least 2 aircraft carriers and 5 new destroyers will be acquired from British Navy in 1946. The 3 "Napier" (N) class destroyers acquired in 1941 will be returned.

Brazil. On V-J Day the Navy comprised two old 19,200-ton battleships; one old 3,150-ton cruiser; 9 new plus 1 old destroyer; 8 new DE's; 6 old T.B.'s; 3 subs; 6 new corvettes; 5 modern mine-layers, plus numerous sub-chasers, river gunboats, etc. During the war the Navy acquired from the U.S. Navy 8 new DE's and over 15 sub-chasers; completed 6 destroyers of the "Amazonas" class, 3 of the "Dias" class and 6 corvettes.

Canada. When Canada entered the war her naval establishment, considering her extensive stretch of seacoast, was the smallest in the world. All she could muster was a fleet of 7 destroyers, 6 mine-sweepers and an odd-dozen of assorted coastal vessels with a naval nucleus of 1,774 officers and men. At the conclusion of the war the R.C.N. had expanded more than 50-fold to a strength of over 300 warships, 400 auxiliary naval vessels and a personnel upwards of 95,000. The 300 warships were made up of the new light cruisers *Uganda* and *Ontario*; the light fleet carrier *Warrior*, the escort carriers *Puncher* and *Nabob* (all on loan from Royal Navy); 23 destroyers (including 6 old ex-U.S. ships); 75 odd frigates; over 120 corvettes; 3 auxiliary A.A. cruisers and over 70 fleet mine-sweepers. Postwar plans include the disposal of the old ex-U.S. destroyers, the 14 and 15 year old destroyers *Assiniboine* and *Saguenay*, the corvettes, minesweepers and most of the coastal craft built or acquired during the war. Frigates and auxiliary

COMPARATIVE NAVAL STRENGTH OF LEADING POWERS
(As of Dec. 31, 1945)

(Figures given for foreign navies are estimated only)

Category	Nation	Battle- ships	Aircraft Carriers	Escort Carriers	Heavy Cruisers	Light Cruisers	De- stroyers Torpedo Boats	De- stroyer- Escort Frigates	Sub- marines	Total Strength
UNITED STATES:										
Prewar strength		17	7	1	18	19	172	0	113	347
Present strength		27	40	80	33	57 ^a	445	363 ^b	263	1,308
Postwar strength (proposed)		21	37	79	31	48	367	300	199	1,082
BRITISH COMMONWEALTH NATIONS										
Prewar strength		15	6	1	17	55	215	0	56	365
Present strength ^c		19	29	7 (?)	12	60	270	175 ^d	128	696
FRANCE:										
Prewar strength		7	0	1	7	14	71	0	80	180
Present strength ^e		5	0	2	3	8	30-40	12	30-40	90-110
ITALY:										
Prewar strength		6	0	0	8	14	136	0	115	279
Present strength		5	0	0	0	10	-60	0	40	-115
SOVIET RUSSIA:										
Prewar strength		3	0	0	7	2	106	0	200	318
Present strength ^f		4	0	0	9	2	100	0	250	365

Note: "Present Strength" includes warships under construction after V-J Day.
^a Excludes *Omaha* transferred to Russia. ^b Frigates omitted. ^c Includes 1 battleship, 1 cruiser, 28 destroyers, 15 subs on loan to foreign navies but excludes 33 lend-leased escort carriers and 58 frigates or DE's being returned to U.S. ^d Includes large sloops and cutters. ^e Includes scuttled ships salvaged and reconstructing. ^f Includes 1 Br. battleship and 1 U.S. light cruiser acquired under lend-lease and 55 Nazi U-boats (45 seized and 10 acquired under agreement with U.S. and Britain).

cruisers will be put into reserve. Personnel of the R.C.N. will be reduced to 10,000 by March, 1946, and only 3 of the 14 wartime naval bases will be maintained—Halifax, Sydney, and Esquimalt.

France. By the end of 1945 the French Navy had succeeded in salvaging over 100,000 tons of a total of 270,000 tons of combat ships scuttled at Toulon, Nov., 1942. Besides the battleship *Strasbourg*, the seaplane carrier *Comm. Teste*, the light cruisers *La Galissonnière* and *Jean de Vienne*, several destroyers, subs, and escort ships have been salvaged, with some of the light units already back in service. The scuttled battleships *Dunkerque* and *Provence* and the light cruiser *Marseillaise* are a total loss. The badly damaged battleship *Jean Bart*, brought back from Casablanca, is undergoing reconstruction. With the *Richelieu* and old *Lorraine* now in service and the *Strasbourg* and *Jean Bart* reconstructing, the French fleet should have 4 battleships in service in the near future. (The old battleship *Paris* is now a training ship.) The French Navy also possesses the escort carrier *Dixmunde* (ex-HMS *Biter*), the plane transport *Béarn*; the heavy cruisers *Suffren*, *Duquesne* and *Tourville*; the light cruisers *Gloire*, *Montcalm*, *Georges Leygues*, *Emile Bertin*, *Jeanne D'Arc*, *Duguay-Trouin*, the smaller *Le Triomphant*, *Le Fantasque* and *Le Indomptable-Malin*; 30-40 odd destroyers; 12 odd frigates and DE's; 30-40 submarines; 6 gunboat-sloops, numerous corvettes; minelayers and other auxiliaries. The postwar strength of the navy's personnel will be reduced to 45,000 officers and enlisted men. It totalled 70,000 on Jan. 1, 1946, and 85,000 on Sept. 1, 1939.

From Britain's share of the surrendered German fleet, France has received 6 destroyers (2 *Narviks*, 2 *Maas*, 2 *Elbings*), 2 T.B.s. and 5 large minelayers. Augmented by these and other light units from the British and U.S. Navies, the French Fleet today totals about 330,000 tons, or slightly more than half its prewar strength.

Germany. Like the Jap Navy the German surface fleet was completely destroyed before her surrender in May, 1945. A fleet built for commerce raiding but not even used with offensive spirit and determination for that purpose, suffered in the end the piecemeal destruction for which such defensive handling foredoomed it. All the Nazi Navy had afloat and in "serviceable condition" at the time of her surrender totalled 140,000 tons of combat ships and 90,000 tons of auxiliaries. Included were the heavy cruiser *Prinz Eugen* and light cruiser *Nürnberg*; 30 destroyers and torpedo boats and 144 U-boats.

It was reported in January, 1946, that the surviving German ships now operable or which can be made so have been divided between Britain, U.S. and Russia. A total of 1,789 naval vessels of all types were involved—2 cruisers, 30 destroyers and t.b.s., 30 of latest type U-boats, 48 depot ships and 1,679 small auxiliaries. Besides 10 U-boats apiece, each of the 3 nations received the following: U.S.—heavy cruiser *Prinz Eugen*, 7 destroyers and t.b.s., 12 depot ships and 560 small auxiliaries; Russia—cruiser *Nürnberg*, 10 destroyers and t.b.s., 15 depot ships and 507 small auxiliaries; Britain—13 destroyers and t.b.s., 21 depot ships and 612 small auxiliaries. The British at the same time revealed that their Navy had scuttled 114 surrendered U-boats in the North Atlantic. The 2 badly damaged cruisers *Admiral Hipper* and *Emden* are to be blown up. The uncompleted carrier *Graf Zeppelin*, seized by Russia near Stettin, presumably falls to the Soviets. The fate of the damaged light cruiser *Leipzig* was not announced up to the end of 1945.

As for the once great underseas fleet of U-boats, of which more than 1,000 were built during the war, only 144 remained afloat and in active service. The majority of these survivors were of the latest design, highly efficient craft of 1,600 tons each and fitted with the "schnorkel breathing mast" to permit submerged battery charging and apparatus to baffle our radar detection devices. Many others of this ingenious type were building at the war's end. U-boat losses totalled over 782 during the war. The Nazis lost 66(?) from Sept., 1939 to Dec., 1941; 85 in 1942; 237 in 1943; 241 in 1944, and 153 in 1945. They also destroyed or scuttled many others in port or on the building ways in the last stages of the war. In addition, the Russians captured 45 intact subs at Danzig in March, 1945, and destroyed many others during the war. These losses are in addition to the 782 destroyed by U.S. and British forces.

Great Britain. The British Navy lost naval parity because of smaller shipbuilding capacity, and now trails the U.S. Navy in strength. Before the war British naval strength was guided by a 2-1 standard, which meant in practice that she must maintain a margin of superiority over the combined naval strength of any two leading continental powers (namely, Italy and France, or Italy and Germany). But though she has taken second place among the world's naval powers, her strength is still far greater than that of all the European naval powers combined, including Soviet Russia. At the start of the war in September, 1939, the Royal Navy (including those of the Dominions) was composed of 12 battleships, 3 battlecruisers, 6 old and 1 new aircraft carriers, 17 heavy and 55 light cruisers, 215 destroyers and 56 submarines, a total of some 365 combatant ships. Losses during the war totaled 730 naval vessels, not including light coastal ships and landing craft. Of the 730, 260 were combatant ships as follows: 3 battleships, 2 battlecruisers, 5 aircraft carriers, 3 escort carriers, 5 heavy and 25 light cruisers, 3 fast minelayers, 1 monitor, 147 destroyers, DE's and frigates, and 70 submarines. Losses in personnel by the Royal Navy (exclusive of the Dominions) totalled 65,554 casualties, of which 50,898 officers and men were killed or missing.

The fleet late in 1945 is believed to have comprised 18 capital ships composed of 4 new "King George V's," 3 new powerful "Vanguard" class (completing), 2 "Nelsons," the battlecruiser *Renown*, 4 "Queen Elizabeths" and 4 "Royal Sovereigns"; 14 new (and one old) fast carriers, the *Illustrious*, *Formidable*, *Indomitable*, *Implacable*, *Indefatigable*, *Victorious*, *Venerable*, *Powerful*, *Colossus*, *Vengeance*, *Ocean*, *Glory*, *Warrior*, *Leviathan*, and the old *Furious* (now in decommissioned reserve); 7(?) escort carriers (CVE's); 10 heavy and 47 light cruisers (excluding 4 Australian); at least 225 destroyers; 100 frigates, large sloops and cutters; 128 submarines; 3 fast minelayers and 4 monitors, a total of some 556 combatant ships. Included in these figures are 1 battleship (*Royal Sovereign*), 1 fleet carrier, HMCS *Warrior*,⁹ CVE's (HMCS's *Puncher* and *Nabob*), 3 cruisers (HMCS's *Uganda* and *Ontario*, and O.R.P. *Danae*), 28 destroyers, 15 subs and a number of frigates "on loan to other navies." Excluded are 33 escort carriers and 58-odd "Captain" class frigates being returned to the U.S. Navy.

Under construction on V-J Day (last September) were 35 warships including one 42,000-ton battleship of the "Vanguard" class, at least 16 fleet type aircraft carriers (including the *Warrior* and 6 sister-ships, 4 of 33,000 tons each and 2 super 45,100

tonners, the *Audacious II* and *Ark Royal II*), 10 cruisers (including the 8,885-ton *Tiger* and *Blake*), and 8 destroyers, all of which were ordered before the Jap surrender. Three other battleships of the "Vanguard" class (previously mentioned), the *Vanguard*, *Conqueror*, and *Thunderer*, are rapidly being outfitted for service and should be on their builder's trials late in 1946. A third 45,000 ton carrier, the *Eagle II*, which was half finished, was cancelled in January, 1946.

No definite plans for Britain's postwar Navy had been revealed up to late December, but it is expected the Admiralty will follow the U.S. Navy's example of scrapping obsolete ships and laying up surplus vessels in reserve. Step number one in disposing of surplus warships that have outlived their usefulness was taken in October, when the Admiralty commenced the return of ships lend-leased from the U.S. The first group of "Captain" class frigates sailed back to the U.S. Only about 58 of the 78 received are being returned, for 20 have been lost. Step number two was taken last November and December when the first group of lend-leased CVE's returned to the Norfolk Navy Yard, U.S., with American troops. The baby flat tops were the *Shah*, *Searcher*, *Tracker*, *Stalker*, *Hunter*, *Attacker* and *Begum*. The remaining CVE's were scheduled to leave Southampton at the rate of 5 a month. In all, 33 of these escort carriers are being returned out of 38 lend-leased, the others being either sunk or "on loan" to other navies.

Italy. No final disposition was made of the Allied-controlled Italian fleet up to March, 1946, except for the temporary allocation of 15 torpedo craft to Soviet Russia. Although weakened considerably by heavy war losses, the Italian Fleet is still a strong sea force possessing 5 battleships (the new *Italia* and *Vittorio Veneto* and the old modernized *Cesare*, *Dulio* and *Doria*); 10 light cruisers (*Garibaldi*, *Abruzzi*, *Eugenio Di Savoia*, *Duca D'Aosta*, *Montecuccoli*, *Cadorna* and the smaller *Regolo*, *Africano*, *Magno* and *Traiano*); about 45 destroyers and large torpedo boats, 40-odd submarines, 10 sloops and corvettes, a seaplane carrier plus several midget subs, MTB's, minelayers, mine-sweepers, gunboats, etc.

The first postwar dent in Italian naval strength was taken in July when Soviet Russian crews took possession of 6 Italian destroyers at Italian ports. The ships were the new "Ariete" class destroyers *Leone II* and *Sauro II*, the older *Dardo* and 3 torpedo boats, the *Pleiadi*, *Cigno* and the new *Dezza*. Operating these ships should present no technical problem to the Russians as all of Russia's modern destroyers have been built to Italian design. The Italian Navy lost over 190 combatant warships, chiefly in action against the British Navy. Losses consisted of the new battleships *Roma* and *Impero* and the old *Cavour*; 1 armored cruiser; 7 heavy cruisers; 14 new light cruisers (including 8 uncompleted "Regolos"); 1 colonial cruiser; 75-odd destroyers and large torpedo boats and over 90 submarines.

Japan. Primarily to faulty strategy must we place the failure of Japan's Navy in this war. Where she might have used her fleet to seek out and destroy her enemy's navy, as the U.S. has done, she chose instead to use it principally as an adjunct to the army, for getting troops to their destination and protecting lines of communication. When compelled to give battle, as with the Russians in 1905, she chose to await the enemy in her home waters. It would seem that this concept of defensive naval strategy accounted for the remnants of Japan's fleet being kept lying in wait at home bases for an

American invasion, a decision that spelled disaster. (It is now known that most of the major ships had been placed out of commission.) Powerful Allied carrier raids on her warships moored at Kure, Sasebo, Maiduru, etc., completely wrecked what remained of Japan's once mighty fleet. Because of her inability to control even those sea and skyways adjacent to her own coast, Japan, without being invaded and with a large army virtually intact, had to surrender.

At the start of the war Japan had some 255 combatant ships and 135-odd auxiliary vessels in service, a total of about 390 in all. Combatant ships consisted of 10 battleships, 10 aircraft carriers (including the converted *Shoho* and *Zuiho*), 2 sea-plane carriers, 18 heavy and 17 light cruisers, 3 cruiser-minelayers, 125 destroyers and large torpedo boats, and 70-odd fleet submarines. During the war she built (or converted) over 825 naval vessels of all types including 2 battleships (*Yamato* and *Musashi*), 15 aircraft carriers (*Taiho*, *Shimano*, *Amagi*, *Chitose*, *Chiyoda*, *Katsuragi*, *Unryu*, *Hayataka*, *Hataka*, *Ryuho* and the CVE's *Chuyo*, *Unyo*, *Jinyo*, *Otaka* and *Kaiyo*); 5 light cruisers (*Sakawa*, *Agano*, *Noshiro*, *Yahagi* and *Oyodo*); 65-odd destroyers, an unknown number of destroyer-escorts; and about 125 oceangoing submarines, a total of over 212 combatant vessels. The 600-odd auxiliaries consisted of some 350 midget subs, PT-boats, frigates, escorts, plane transports, mincraft, fleet auxiliaries, etc. This gave the Japanese fleet a wartime total of over 467 combat ships and over 735 auxiliaries.

Approximately 670 ships of all types were lost or wrecked of which 340-odd were combat ships. Included in the 340-odd ships were 11 battleships, 27 aircraft and escort carriers (including 2 uncompleted); 16 heavy cruisers, 2 old armored cruisers, 22 light cruisers; 133-odd destroyers; and 129 oceangoing submarines. Auxiliary craft lost were 2 new seaplane carriers, over 50 midget subs, about 80 frigates and escort vessels, an odd dozen seaplane tenders and plane transports, numerous mincraft, transports, etc. U.S. Navy subs accounted for 276: including 1 battleship, 4 fleet carriers, 4 escort carriers, 3 heavy and 9 light cruisers, 43 destroyers, 23 submarines, and 189 auxiliary vessels. (In addition British subs sank 1 heavy and 1 light cruiser and 3 submarines.)

Japan ended the war with 532 naval vessels of which only 99 were combat ships. The huge balance consisted of small fry such as 300-odd midget subs, 93 frigates and escort vessels, gunboats, PT-boats, 1 sub-tender, mincraft, 2 old training ships, and the like. They had under construction before the war's end three aircraft carriers (*Kasagi*, *Ibuki*, and *Aso* (latter two wrecked in July, 1945, carrier raids); 3 heavy destroyers, 15 escort destroyers and 77 "other types" of naval vessels. Work on the carriers had been discontinued by April 1 but the building of the smaller naval vessels went on as late as August 27.

The Imperial Navy had a strength afloat and ashore of over one million men, including 250,000 manning naval vessels, 200,000 in the Naval Air Corps, 375,000 in overseas garrisons and the balance in navy yards, garrisons and communication centers on Japan's main home islands. Losses in personnel during the war totalled approximately 262,000 officers and men, of which 161,000 were killed (including 1,500 missing) and 101,000 wounded.

On Oct. 31, U.S. Secretary of State Byrnes disclosed that 61 of Japan's 99 surviving combatant warships—1 battleship, 4 carriers, 2 heavy and 3

light cruisers and 51 submarines—will be scuttled under the auspices of the U.S. Navy. (Japanese steel firms had melted down 30 subs at Kure up to February, 1946.) The remaining ships, 38 destroyers and some 93 patrol craft (frigates, escorts, gunboats), will be divided equally among the U.S., Great Britain, Soviet Russia, and China. The 10 major warships to be sunk are the battleship *Nagato*; the aircraft carriers *Katsuragi*, *Hayataka*, *Hosio* and *Ryuhō*; the heavy cruisers *Takao* and *Myoko*; the light cruisers *Sakawa*, *Kitakami*, and *Kashima*. With the scuttling of these 10 large warships and the transfer of the surviving smaller ships to the four United Nations powers, the Japanese Navy will cease to exist. (The *Nagato* and *Sakawa* were to be used in the Bikini atom bomb tests.)

Netherlands. Heavy losses weakened the Dutch fleet to such an extent that the Dutch Government today depends on the British Navy to protect her overseas empire. The fleet now consists of the small light cruisers *Tromp* and *Heemskerck*, the 4 British-built destroyers *Van Galen*, *Hiddes*, *Piet Hein II* and *Kortenaar II*, 13 subs (2 are British), 1 corvette and 1 frigate (both British), 2 gunboats, 2 sloops, 4 minelayers, 14 minesweepers plus numerous smaller auxiliaries. War losses were the cruisers *Java*, *Sumatra* and *De Ruyter*, 9 destroyers, 17 submarines, 1 coast defense ship, 3 gunboats, 1 sloop, 20-odd mincraft, 15-odd MTB's and over 50 fleet auxiliaries.

Sweden. Except for the completion of 2 small coastal subs, the U-8 and U-9, no new ships were completed during the past year. The only major ship completed during the war is the minelaying-cruiser *Alvsnabben*. Displacing 4,000 tons, she is equipped with four 6-inch guns and many small AA's. The 1800-ton destroyer *Öland* was launched on Dec. 16. Her sistership *Upland* should follow early in 1946. The two light cruisers, *Göta Lejon* and *Tre Kronor*, laid down in 1942 were not reported launched up to late 1945.

U.S.S.R. Soviet Russia now seeks to develop a fleet commensurate in size and power with her new importance as the world's greatest land power and one of the three most powerful nations on earth. It is to be expected that Moscow will allot more of the yearly budget in postwar years to the building up of a strong protective naval force, to operate in bordering seas. The exact strength of the Red Fleet has never been publicly released but certain ships are public knowledge.

The Red Fleet late in 1945 was believed to consist of the old battleships *Revolusia* and *Komuna* (and the *Marat* now decommissioned as unserviceable); the modern heavy cruisers *Petravlovsk* (ex-German *Lützow*), the *Kirov*, *Gorki* (?), *Kubyshev* (?), *Orjanskidze* (?), *Molotov*, *Voroshilov* and the old *Kavkaz* (*Red Caucasus*); the light cruiser *Krasni Krim* (*Red Crimea*); 21-odd heavy destroyers of the "Leningrad" class, 48-odd destroyers of the "Stremitelni" class, the super destroyer *Tashkent*, 17 old ex-czarist destroyers and torpedo boats, 18-odd torpedo boats of the "Serp" and "Shtorm" classes; over 250 submarines; the old training cruisers *Komintern* and *Aurora*; the sea-plane carrier *Stalin*, plus numerous mincraft, patrol craft, PT-boats, torpedo launches, river gunboats, icebreakers, etc.

During the war the British lend-leased 15 combat ships to Russia. This occurred on May 30, 1944, aboard the battleship *Royal Sovereign*, lying at anchor in the Firth of Forth near Edinburgh. The ships, besides the *Royal Sovereign* (renamed *Archangelsk*) are 10 former U.S. destroyers and

4 modern subs. The U.S. Navy lend-leased the light cruiser *Milwaukee* (renamed *Murmansk*), some 50 PT-boats, and over 200 new craft including large and small sub-chasers, patrol vessels, minesweepers, landing-craft, infantry, etc. Russia added to her sub fleet by seizing from the German Navy 45 intact U-boats in the harbor of Danzig on March 30, and also has possession of the damaged Nazi carrier *Graf Zeppelin*.

Warships known to be under construction are the battleship *Treti International*, the heavy cruisers *Frunze*, *Kaganovich* and three others unnamed, plus an unknown number of heavy and light destroyers, subs, patrol craft and gunboats. (See GERMANY, ITALY and JAPAN for Soviet Russia's share of Axis warships.)

JAY LAUNER.

NAVY, U.S. Department of the. A Department of the U.S. Government, established in 1798, which supervises and maintains a naval establishment in readiness for the performance of such duties as the President, who is Commander in Chief, may order. The principal divisions of the Department are as follows:

Executive Offices of the Secretary
Office of the Chief of Naval Operations
Bureau of Yards and Docks
Bureau of Naval Personnel
Bureau of Ordnance
Bureau of Ships
Bureau of Supplies and Accounts
Bureau of Medicine and Surgery
Bureau of Aeronautics
Headquarters United States Marine Corps
United States Coast Guard

For organization and activities of the U.S. Navy, see the articles on COAST GUARD, NAVAL PROGRESS, and WORLD WAR in this and previous volumes. Secretary of the Navy in 1945: James V. Forrestal; Under Secretary, Ralph A. Bard.

NECROLOGY. The following is a list of notable persons who died during the year 1945. For deaths of political significance, see the countries.

Abdullah, Achmed. Writer of adventure stories. Served in World War I as an officer in the British Army. Parents reported to have been Grand Duke Nicholas of Russia and an Afghan princess. He was raised as a Moslem, but at his death he was a Roman Catholic. Some of his novels are *Red Stain*, *Trial of the Beast*, and *Deliver Us from Evil*. Died New York, April 12, aged 64.

Agnelli, Giovanni. Italian industrialist; president of the Fiat Motor Works, publisher of *La Stampa*. A Fascist who was an important figure in the mobilization of Italy's industries for war, he survived the fall of Fascism but lost his business. Died Turin, Italy, December 16, aged 79.

Ainley, Henry. British Shakespearean actor. Died London, England, November, aged 86.

Albee, Dr. Fred M. (1876-1945). Orthopedic surgeon. Inventor of numerous techniques and instruments used in bone-graft operations. Died New York, Feb. 15.

Amery, John. Son of Leopold S. Amery, former British Secretary of State for India. Pleaded guilty to high treason by cooperation with Germany during World War II and sentenced to death by hanging, November 28. Sentence executed December 19, Wandsworth Prison, London. Aged 33.

Appleton, Robert. Publisher. Retired president of Robert Appleton Publishing Co., previously a member of D. Appleton & Co. Died North Andover, Mass., Jan. 19, aged 80.

Arosemena, Florencio M. Former President of Panama. Elected to office 1928 by the lightest vote in the history of the country. Driven from office January 2, 1931, by a revolutionary group and died New York, August 30, aged 72.

Aston, Dr. Francis W. (1877-1945). British scientist; perfected the mass spectrograph, which was used in research on heavy water and uranium 235. Awarded the Nobel Prize in 1922, he had served since 1935 as Chairman of the International Committee on Atoms. Died Cambridge, England, November 30.

Baker, Dr. Sara J. (1878-1945). Pediatrician. Headed the child-hygiene bureau in New York City. During her term in office the death-rate of infants was reduced from

144 per 1,000 in 1907 to 71 per 1,000 in 1922. Author of several books on pediatrics, and a consultant in child health for the U.S. Public Health Service and for the children's bureau of the Department of Labor. Died New York, February 22.

Baldwin of Bewdly, Countess. Wife of former Prime Minister of Great Britain, Lady Baldwin was an early advocate of votes for women. Died in her 70's, June 18, in Stourport-on-Severn, Worcestershire, England.

Barbier, George. Character actor. Educated in a theological seminary. Achieving his first success on Broadway as Quasimodo in *The Hunchback of Notre Dame*, he appeared later in *Beggar on Horseback*, *The Front Page*, and *That's Gratitude*. His career in Hollywood included parts in *The Big Pond* and *Million Dollar Baby*. Died at the age of 80, Los Angeles, August 19.

Barthélemy, Joseph. French politician and former professor of constitutional law at the University of Paris; served as Minister of Justice in the Vichy Government until March, 1943. Chief prosecutor at the trials in Riom, he was himself, at the time of his death, about to be tried for treason. Died, aged 70, near Toulouse, France, May 15.

Bartók, Béla (1881-1945). Hungarian composer. Appointed professor of music at the Royal Academy of Music in Budapest 1907. With Zoltán Kodály, he assembled a collection of some 6,000 Hungarian folk tunes. Made his first appearance in the U.S. in 1927 with the Philharmonic Orchestra in Carnegie Hall, where he played his *Rhapsodie, Op. 1*. Other performances in this country were frequent until 1943, when he and his wife, Ditta Pasztory Bartók, played his *Musica for Two Pianos and Percussion*. His compositions included operas, orchestral suites, symphonic poems, concertos for piano and violin, and piano and violin sonatas. Died New York, September 26.

Becker, Dr. Carl (1873-1945). Historian & educator. Professor emeritus of history, Cornell University. Works *The Heavenly City of the Eighteenth Century Philosophers*, *Progress and Power*, *How New Will the Better World Be?* Died Ithaca, N. Y., April 10.

Beer-Hoffman, Dr. Richard (1866-1945). Viennese poet and playwright. Works. *The Count of Charolais*, *Jacob's Dream*, *The Young David*, plays in verse. Died New York, Sept. 26.

Bellaire, Robert I. Journalist employed by *Collier's Magazine* as correspondent. Killed in Tokyo, Japan, September 30, when his jeep overturned. Aged 30.

Bellmann, Henry (Heinrich Heuer). Author, pianist, and teacher. Achieved his greatest success with *Kings Row*, a best-selling novel, 1940. Had taught music at De Pauw University and served as Dean of the Curtis Institute of Music. Died New York, June 17, aged 63.

Benevides, Marshal Oscar (1876-1945) Peruvian statesman. Provisional President twice. Foreign Minister. Died Lima, Peru, July 2.

Benchley, Robert C. Humorist and drama critic, on the staffs, successively, of the Curtis Publishing Co. of Philadelphia, the *New York Tribune*, *Vanity Fair*, the *New York World*, *Life*, and the *New Yorker*. A monologist and actor, too, he appeared in motion-picture shorts, *The Love Life of a Polyp* and *How to Sleep*, and in several full-length films. His best known books were *Of All Things*, *Love Conquers All*, *The Early Worm*, *The Treasurer's Report*, *No Poems*, *My Ten Years in a Quandary*, and *After 1908*, *What!* Died, New York, November 21, aged 56.

Bendix, Vincent. Inventor of radio direction apparatus for ocean-going vessels, founder of the Bendix Aviation Corp., and president of Bendix Helicopters, Inc. First interested in automobiles, he perfected a self-starter drive and a four-wheel brake. The founder of the Bendix Transcontinental Air Race and donor of the Bendix Trophy, he announced some months before his death a forthcoming helicopter sedan for four passengers. Died New York, aged 64.

Bertram, Adolph. Cardinal. Archbishop of Breslau and dean of the German Catholic hierarchy. Opposed the Nazis' attempt to weaken the church and in 1936 wrote a letter urging the German people to resist the government's drive against religion. Remained in Breslau to welcome the advancing Russians. Died August 12, aged 86.

Bibesco, Princess Elizabeth. British society leader and author of *Portrait of Caroline*. Daughter of Herbert Asquith, first Earl of Oxford and Asquith and former Prime Minister of Great Britain. Her husband, Prince Antoine Bibesco, nearly lost his position as minister of Rumania to the U.S. when his wife attempted to participate in U.S. affairs by supporting John W. Davis in the presidential election of 1924. Died Bucharest, Rumania, April 7, aged 48.

Blozis, Alfred C. Former indoor and outdoor shotput champion of the National Amateur Athletic Union. In March, 1941, he established a shotput record, unequalled since, of 56 ft. 4 1/2 in. He had also played professional football with the New York Giants. Lieutenant Blozis was killed in the Vosges Mountains of France, January 31, while attempting to rescue a comrade; aged 26.

Bong, Major Richard. Military aviator. Killed near Burbank, Calif., on August 6, 1945, while testing a jet-

propelled fighter plane, the P-80 Shooting Star. He had received the Congressional Medal of Honor, as well as many other awards, and had shot down 40 Japanese planes in the Pacific theater of war. Aged 24.

Borchard, Leo. German orchestral conductor. Refused to collaborate with the Nazis and was regarded as a key figure in the restoration of German music. He was shot by sentries in Berlin, August 23, 1945, when the driver of his car ignored their signal to halt. Aged 46.

Bose, Rash Behari. Indian politician. Exiled from India; assumed Japanese citizenship, 1923, and later became an adviser to the Japanese sponsored "Provisional Government of Free India." Further helped the Japanese by urging over the radio that Asia be reserved for the Asiatics. Died Tokyo, January 22, 1945, aged 59.

Bourdet, Edouard. French playwright. Formerly director of the Comédie Française and a consultant in the Ministry of Education of the De Gaulle Government, on music and drama. Best known in the U.S. for the play *La Prisonnière* (*The Captive*). Died Paris, January 17, aged 58.

Bovard, Oliver K. Retired managing editor of the *St. Louis Post-Dispatch*. He had conducted campaigns against corruption in business and politics, helping to expose the "Teapot Dome" scandal and the Fendegast machine. Died St. Louis, aged 73.

Brandeis, Mrs. Alice G. Widow of Associate Justice Louis D. Brandeis of the U.S. Supreme Court. Interested in women's suffrage organizations, in the welfare of the underprivileged, in the alleviation of juvenile delinquency, and in the rights of labor. Vice-chairman of the Progressive League for Alfred E. Smith. Active in the World Zionist Organization and in the Jewish Agency for Palestine. Died Washington, D.C., October 11, 1945, aged 79.

Braun, Max. German editor. Attacked the Nazis from 1933 on, opposing in particular their occupation of the Saar Basin Territory. Losing his citizenship in 1936, he escaped to France, where he edited *News from Germany*, a political journal which contained information smuggled out of Germany. Died London, England, aged 52.

Brower, Charles D. Alaskan business man and author. Known as "King of the Arctic." Had accumulated fortune in the whaling trade. Friend of Will Rogers and Wiley Post, who were on their way to see him when their plane crashed, 1935. Author of *Fifty Years below Zero*. Died, Point Barrow, Alaska, February 12, 1945, aged 83.

Bryan, Charles N. Brother of William Jennings Bryan, he was defeated in 1924 as a candidate for the vice-presidency of the U.S., but he was elected governor of Nebraska three times. Attacked the gasoline, sugar, and coal trusts and effected substantial economies in state government. Died Lincoln, Nebraska, March 3, aged 78.

Buckner, Lt. Gen. Simon B. Commander of the U.S. Tenth Army. Born in Kentucky, the son of an officer of the Confederate Army; attended Virginia Military Institute and West Point, graduating from the latter, 1908, taught at West Point, 1919-23, and at the Command and General Staff School; Commandant at West Point, 1933-36, and Chief of Staff of the Sixth Division, 1939. In command of the Alaska Defense Force, July, 1940, he directed recapture of Aleutians, and died, June 18, in the conquest of Okinawa. Aged 61.

Bundy, Thomas Clark. Tennis star; with Maurice McLaughlin, three times national doubles champion. Died October 13, Santa Monica, Calif., aged 64.

Burgin, Edward L. British statesman. Minister of Transport, 1937-39, Minister of Supply, 1939-40, and a member of Parliament from 1929. He was also a philologist, an authority on archaic Greek, and the author of *Administration of Foreign Estates*. Died near Harpenden, Hertfordshire, England, August 16, aged 58.

Burke, Thomas. British novelist. Author of *Lighthouse Nights*, semi-autobiographical novel of his boyhood in the London slums. *Broken Blossoms*, a film produced by D. W. Griffiths, was based upon this book. Died London, September 23, aged 59.

Byas, Hugh. Newspaperman. Formerly employed by the *New York Times* and the *London Times* as Tokyo correspondent. Edited for a time *The Japan Advertiser*, wrote several books on Japan, and lectured on foreign affairs at Yale University. One of his best known books was *Government by Assassination*. Died New Haven, March 6, aged 70.

Cabot, Dr. Hugh (1872-1945). Surgeon. Dean of the medical school of the University of Michigan, 1921-30, and a member of the staff of the Mayo Clinic, 1930-39. Strong advocate of group medicine. Died near Ellsworth, Me., August 14.

Calder, Alexander S. (1870-1945). Sculptor. Numerous statues and monuments. "Lief Ericson," gift of U.S. to Iceland; "George Washington," in New York; the "Shakespeare Memorial," Philadelphia. Died Jan. 8, New York.

Calder, William M. Republican Senator. Active in real estate and building. Borough Commissioner of Brooklyn. In Congress sponsored first daylight-saving law, woman's suffrage amendment, and legislation dealing with housing and building materials. Died March 3, New York City, aged 76.

Calles, Gen. Plutarco E. Mexican statesman. Became prominent in 1911 as a leader in the revolution against

Porfirio Diaz. In 1919 he became Secretary of Industry, Commerce, and Labor under President Carranza; Minister of the Interior under President Obregon until 1924, and president 1924-28. His administration was notable for its improvement of laws pertaining to education, labor and agriculture. An opponent of the Catholic Church and an advocate of constitutional government. Opposed rule by military chieftains. Died Mexico City, October 19, aged 68.

Camacho, Gen. Maximino Avila. Elder brother of the President of Mexico. Once a cowhand and a bull-fighter, Gen. Camacho later became Secretary of Commerce. Career as a public figure began 1910, when he served as leader of the fifty-first cavalry regiment in the revolution and fought in 250 battles without experiencing a defeat. Died Puebla, Mexico, February 17, aged 52.

Cannon, Dr. Walter B. George Higginson professor of psychology at the Harvard Medical School since 1906. Author of *Bodily Changes in Pain, Hunger, Fear, and Rage*. An authority in the fields of psychology, endocrinology, and neurology. Discoverer of a hormone which he called "sympathin," he did much research on the treatment of shock. Died October 1, Franklin, N.H., aged 74.

Carlin, George A. Editor and general manager of the United Features Syndicate, Inc. Syndicated Drew Pearson, Westbrook Pegler, and Mrs. Franklin D. Roosevelt, among others. Died New York City, November 28, aged 55.

Cassel, Prof. Gustav (1866-1945). Swedish educator and adviser on finance to the Swedish Government. Critic of the gold standard and planned economy. Works: *Theoretical National Economics; On Quantitative Thinking in Economics*. Died Sweden, Jan. 14.

Cavigli, Marshal Enrico. Italian Senator and Minister of War, 1919. In 1920 he helped to defeat D'Annunzio's attempt to seize Fiume. Later, a consistent opponent of Fascism, he is thought to have plotted with Marshal Badoglio to remove Mussolini from office. Died Finale Marina, Italy, March 22, aged 83.

Chapman, Dr. Frank. Ornithologist. For fifty years curator in the American Museum of Natural History, New York City. Started the practice, since widely adopted, of exhibiting birds in their natural surroundings. The collection which he assembled for the museum numbers about 750,000 and is held to be the finest in the world. Also the founder and editor of *Bird Lore* and the author of many books on birds. Died New York City, November 15, aged 79.

Charlesworth, Hector W. (1872-1945). Canadian journalist and author. Chairman of the Canadian Broadcasting Commission, 1932-36. Created "Theater of the Air," and introduced many British programs. Died Toronto, Canada, Dec. 30.

Charnwood, Lord (Godfrey R. Benson). British biographer of Abraham Lincoln and Theodore Roosevelt and author of numerous detective stories. A member of the Liberal Party, he was elected to Parliament five times. Died London, England, February 5, aged 81.

Chernyakhovsky, Gen. Ivan D. Russian military leader. Commander of Third White Russian Army, the first to invade Germany. Tank expert who helped to direct the defense of Voronezh, 1942. Made a Hero of the Soviet Union for his part in the crossing of the Dnieper, 1943, heading part of the Third Ukrainian Front of Marshal Gregor Zhukov. At the time of his death his troops had taken virtually all of East Prussia and, with the aid of the Second White Russian Army of Marshal K. K. Rokossovsky, trapped the remainder of 20 German divisions below Koenigsberg. Died East Prussia, February 18, 1945, aged 37.

Clarke, John H. Retired Supreme Court Justice. Advocated international machinery for the insuring of peace. In 1918 he pleaded for a league of nations, and in 1921 he urged that war debts be cancelled as a gesture of international good will. An early opponent of prohibition, he later denied that the late President Roosevelt's proposal to enlarge the Supreme Court was contrary to the Constitution. Died San Diego, Calif., March 22, aged 88.

Clendening, Dr. Logan. Medical author and columnist. Wrote several popular books on medicine. *The Human Body, The Care and Feeding of Adults, Behind the Doctor*. Died Kansas City, Mo., January 31, aged 61.

Coburn, Charles. British singer and actor, well-known in the London music halls, he wrote and popularized many songs, the most famous of which was "The Man Who Broke the Bank at Monte Carlo." Died London, England, November 23, 1945, aged 93.

Colete, Mme. Jean. Polish scientist. Worked with Marie Curie at the Radium Institute in Paris, continuing Mme. Curie's research in radioactivity after the latter's death, 1934. Died late in January, 1945, Paris, aged 47.

Condon, Dr. John F. Schoolteacher. Became famous in 1932 as the intermediary in the Lindbergh kidnapping. Referred to at the time as "Jafie," he delivered a ransom of \$50,000 to a man called "John," whom he later identified at the trial as Bruno Richard Hauptmann. Died New York City, January 2, aged 85.

Connolly, Joseph V. President of King Features Syndicate, Inc., the International News Service, and Interna-

tional News Photos. Employed by Hearst in 1920, Mr. Connolly became within three years assistant manager of the Hearst syndicates and, in 1931, president of King Features. Directing the writing and distribution of news and comic features, he was responsible for the acquisition of many outstanding personalities in the field of journalism. Died New Rochelle, N.Y., April 18, aged 50.

Corbett-Smith, Major Arthur. British author and publicist. Died Margate, England, week of January 29, aged 65.

Craig, Gen. Malin. Former commandant of the Army General Staff College in Washington, D.C., and Army Chief of Staff, 1935-38. He directed many improvements in the Army while he was in this position. In 1941 he became active again as head of the personnel board of the War Department, and supervised the issuance of commissions to civilians. Died Washington, D.C., August 25, aged 70.

Craven, Frank. Actor, playwright, and director. Made his first successful appearance on the stage in 1911. In 1914 he wrote and acted in *Too Many Crooks*, which was followed by *Thru Way Out*. Then collaborated with John Golden on several plays, the best known being *That's Gratitude*. In Hollywood, he acted in many films, among which were the film versions of *That's Gratitude* and *Our Town*, and wrote numerous scripts. His last performance was in March, 1944, in Zoe Akins' *Mrs. January* and *Mr. Ez*. Died Beverly Hills, Calif., September 1, aged 65.

Crawford, Lindsay. Editor. First consul of the Irish Free State in U.S. and president of the Self-Determination League of Ireland, Canada, and Newfoundland. Died New York City, week of June 11, aged 76.

Crews, Marquess of (Robert Offley Ashburton). Retired British statesman. Son of the English poet, Richard Monckton Milnes. Served early in his career as Lord Lieutenant of Ireland. British Ambassador to France 1922-28, then Secretary for India, and, in 1931, Secretary of State for War. Died Leatherhead, Surrey, England, June 20, aged 87.

Crow, Carl. Author and editor. Founded and edited the Shanghai *Evening Post*. Opposed to Communism but not uncritical of the Kuomintang, he supported, for the most part, the policies and administration of Chiang Kai-shek. Best known work was *Four Hundred Million Chinese*, a best-seller in 1937, and his latest published work was *China Takes Her Place*. Died New York, June 10, aged 62.

Crown, James E. Editor of the *New Orleans States*. Conducted a campaign against the political machine established by the late Huey Long, being largely responsible for its overthrow, and urged the enforcement of the gambling laws. Died New Orleans, January 10, aged 72.

Cunningham, Capt. Harold A. Former commander of the *Leviathan* and Commodore of the U.S. Lines. Died New York City, aged 61.

Curtin, John. Australian statesman. Elected Prime Minister on the Labor Party ticket late in 1941. Helped to effect Australia's transition from peace to war. His problem was essentially that of enforcing strict control of the Australian economy and of persuading his Labor colleagues that nationalism was impracticable in an international emergency. Much credit is due him for the successful collaboration of Australia, Great Britain, and the U.S. in the prosecution of the war. Died Canberra, August 5, aged 60.

Darnand, Joseph. Chief of Vichy Militia. Collaborated with Nazis. Thousands of resistance workers tortured or killed by his militiamen and thousands of others sent to slave labor in Germany. Executed by firing squad, October 10, Fort de Chatillon, France, aged 47.

Davis, Dwight F. Statesman and athlete. National doubles champion in tennis, with Holcombe Ward, 1899-1901. While Secretary of War, under President Coolidge, he ordered the court martial of Col. William Mitchell. Under President Hoover, he was Governor General of the Philippines. The Davis Cup, symbol of international supremacy in tennis, was the gift of Mr. Davis. Died Washington, D.C., November 28, aged 66.

Davis, Fay (Mrs. Gerald Lawrence) (1872-1945). Actress. Popular in London and New York. Figured in Shakespearean roles. Died Exmouth, England, Feb. 26.

Dawson, Bertrand (Lord of Penn). English physician. Served Edward VII, George V, Edward VIII, and George VI. One of the few men of medicine to be elected to the House of Lords. Later appointed to the Privy Council, he was President of the Royal College of Physicians, 1931-38. Lord Dawson was noted for his progressive views on prohibition, divorce, and birth control. Died London, England, March 7, aged 81.

de Denterghen, Count André. Belgian diplomat. Ambassador to France, 1935-38 and Ambassador to Italy until 1940. Died Brussels, April 24.

de Forest, Prof. Alfred (1888-1945). Engineer and educator. Developed "magnafux test," for discovering defects in metals. Died Marlboro, N.H., Apr. 5.

Deland, Margaret W. Author of various novels dealing with social and religious issues. Her best known works were *Old Chester Tales* and *John Ward, Preacher*, which attacked fundamentalism in religion and the doctrine of

eternal damnation. Died Boston, Mass., January 18, aged 88.

de Moor, Dr. Johannes M. Dutch jurist and authority on shipping. Left Netherlands for England, 1940, when he became president of the Netherlands Navigation Council and president of the Netherlands Maritime High Court. Appointed Netherlands delegate on the United Nations War Crimes Commission, 1943. Died London, May 23, 1945, aged 49.

Denny, Harold. Correspondent of the *New York Times* for 23 years. Captured near Tobruk by the Germans in World War II, he had been employed previously on a variety of assignments which included the Nicaraguan incident, the war in Finland, the invasion of Ethiopia, and World War II. Of particular interest was his series of articles on the Russian trials, 1936-38. Died Des Moines, Iowa, August 8, aged 56.

Dentz, Gen. Henri Fernand. French military leader. Directed the defense of Syria against de Gaulle and British troops. Later convicted of aiding revolt against the British in Iraq, of yielding airfields in Syria to the Germans, and of asking for their assistance against the Allies. Died in Fresnes Prison, Paris, December 13, while serving a sentence of life imprisonment for treason, aged 64.

Donoghue, Stephen (Steve). English jockey who rode six Derby winners and won the Queen Alexandra stakes at Ascot six times in succession, reaching the height of his career in 1925. Retired from racing 1938. Died London, March 23, aged 61.

Doriot, Jacques. French Fascist Communist Deputy until 1935 and a member of the French National Council 1941-44. Founder of the French People's Party, a pro-Nazi organization, he wanted the Vichy Government to declare war on Great Britain and the U.S. His death was reported to have taken place in southwestern Germany on or about February 23, during an Allied air attack. Aged 57.

Dozier, Gen. Anton. First officer of the German General Staff to be tried before an American military commission on wartime charge. Convicted, October 12, of ordering the deaths of fifteen soldiers who were taken while they were on a mission for the Office of Strategic Services. His defense was that he had acted under pressure from Hitler. The importance of the case was that it might serve as a precedent against such a defense. The execution took place in Aversa, Italy, December 1.

Douglas, Lord Alfred. English author. A sensational witness in the defense of his friend, Oscar Wilde. The Marquess of Queensbury, Lord Alfred's father and framer of the boxing code, charged in his suit that Wilde had undermined the character of Lord Alfred, and the action resulted in Wilde's imprisonment. Lord Alfred's *Sonnets and Lyrics* was published in two volumes in 1935. Died Lancing, Sussex, England, March 20, aged 75.

Dreiser, Theodore. Novelist of realism. Wrote virtually without style, striving to present people, usually from the poorer classes, as convincingly as possible. Working variously as a laborer, newspaperman, and magazine editor, he achieved his first success with *Sister Carrie*, 1900. Other important works were *The Financier*, 1912, *The Titan*, 1914, *The Genius*, 1915, and *An American Tragedy*, 1925. Just before his death he completed two other novels, *The Bulwark* and *The Stoic*. Though he has never received the unqualified approval of all critics, his importance to American fiction is generally acknowledged. He was a source of encouragement and inspiration to many young writers after 1900. Died Hollywood, Calif., December 28, aged 74.

Easley, Brig. Gen. Claudius M. Assistant Commander of the 96th Infantry Division on Okinawa. Killed in action, June 19, aged 54.

Edwards, "Gus." Writer of popular songs and producer. Appeared in vaudeville at an early age and later became a theatrical agent, discovering and helping to develop talent among children. Among his proteges were George Jessel, Ray Bolger, Groucho Marx, Lila Lee, and Hildagarde. Best known songs "School Days," "By the Light of the Silvery Moon," and "In My Merry Oldsmobile." Died Los Angeles, Calif., November 7, aged 66.

Elles, Gen. Sir Hugh. British military leader. In World War I, as commander of a successful attack by 350 tanks in the Battle of Cambrai, he demonstrated the value of the weapon as a means of offense. Died London, England, July 11, aged 65.

Eno, William Phelps. Traffic expert. Devised the system of one-way streets and safety islands. Died Norwalk, Conn., December 25, aged 87.

Esselen, Louis. Statesman. Secretary of the United Political party and friend and confidant for many years of Jan Christian Smuts. Died Cape Town, Union of South Africa, week of March 26, aged 65.

Evans, Coradoc. Welsh author. Served on the staffs of several British publications and wrote satires of the Welsh which were well liked in some quarters but strongly resented by some of his readers in Wales. His works include *Taffy*, a play, *Pilgrims in a Foreign Land*, a book of stories, and *Morgan Bible and Waeps*, novels. Died in Aberystwyth, Wales, January 11, presumably aged 62.

Fairfax, Beatrice (Marie Manning Gosh). Widely syndi-

cated journalist whose column, "Advice to the Lovelorn," had a wide following. Started her column in 1898 with the assistance of the late Arthur Brisbane, then managing editor of the *New York Journal*; retired 1905; and resumed her career in 1929, becoming a feature writer for the *International News Service*. Died Washington, D.C., November 28, aged 70.

Farinacci, Roberto. Minister of State in Mussolini's government. Once a Socialist, he founded a daily newspaper, *Cremona Nuova*, in which he urged that Italy intervene in World War I. In 1919 he turned Fascist, changed the name of his newspaper to *Regime Fascista*, and agitated for the prosecution of Socialists, Jews, Catholics, and Freemasons. Serving as Secretary-General of the party, 1925-26, he was removed from office because he disapproved of Mussolini's recognition of the Vatican. In 1928 Farinacci became a member of the Fascist Grand Council and in 1938 Minister of State. Shot by Partisans in Milan on or about April 27, aged 53.

Ferguson, Dr. John C. Authority on Chinese art; educator, and newspaper publisher. Founder and first president of Nanking University and president of Nanyang College, now National Chiao Tung University. Publisher of *Sin Wan Pao*, a Shanghai newspaper, political adviser to the Chinese Government, 1915-28, and delegate, 1921, to the Washington Conference for the Limitation of Armaments. Died Clifton Springs, N.Y., July 3, aged 79.

Field, Sir Frederick L. English admiral. Active in Boxer Rebellion and in World War I, helping to direct the Battle of Jutland. First Sea Lord of the Admiralty and Chief of Naval Staff, 1930-33; Knight of the Bath, 1938. Recalled to active service in 1940. Died York, England, October 24, aged 74.

Fleming, Sir Ambrose. British scientist. Invented the diode valve, an early form of the radio tube, and worked out plans for a transmitting station in Cornwall from which, in 1901, the first transatlantic wireless communication was sent. Adviser to the Marconi Wireless Telegraph Co. Died Sidmouth, England, April 19, aged 96.

Flexner, Bernard. Zionist. Brother of Dr. Abraham Flexner, former director of the Institute for Advanced Study, and of Dr. Simon Flexner, former director of the Rockefeller Institute for Medical Research. Bernard Flexner served with the Red Cross during World War I in Rumania and Poland and became active with the Zionists in 1920. In 1924 he merged several relief committees into the Palestine Economic Corp. for the development of Palestine. Died New York, May 4, aged 80.

Fox, Dr. Dixon R. Historian. President of Union College. Former professor of history at Columbia University, head of American University Union in London, and lecturer. Died Schenectady, N.Y., January 30, aged 58.

Frank, Dr. Bruno. German playwright, poet, and novelist. Left Germany, 1933, and went to Hollywood, Calif., where he became a film writer. Two of best known plays are *Lost Heritage* and *A Man Called Cervantes*. Died Beverly Hills, Calif., June 20, aged 58.

Fraser, Leon. Financier. Varied career as reporter, teacher, soldier, lawyer, diplomat. As an expert in world finance, he became president of the Bank for International Settlements in 1933, and President of the First National Bank of New York in 1937. Died April 8, Comstock, N.Y., aged 46.

Fullerton, Hugh S. Baseball writer. Formerly an associate editor of *Liberty Magazine* and connected at various times with *The Tribune* in Chicago and with the *New York Evening World*. Famous for the accuracy with which he forecast the results of important games, he exposed the "fixing" of the World Series of 1919. He was also the author of numerous books and magazine stories. Died December 27, New Port Richey, Fla., aged 72.

Gilmore, Dr. Charles W. Curator of vertebrate paleontology for the National Museum and the Smithsonian Institution, Washington, D.C. Discovered the bones of *Diplodocus*, a dinosaur, 1923, and reconstructed the skeleton. President of Paleontology Society of America, 1938. Died September 27, Washington, D.C., aged 71.

Glasgow, Ellen A. Novelist of the South. Won the Pulitzer Prize, 1941 for her last novel, *In This Our Life*. Out of sympathy with those who desired a return to the traditions of the ante-bellum years, she was interested in current problems of her people. Her works include *The Descendant*, *The Rattleground*, *The Wheel of Life*, *The Builders*, *Barren Ground*, and *Vein of Iron*. Died Richmond, Va., November 21, aged 71.

Gless, Powell. Associate publisher and general manager of the *Lynchburg News and Daily Advance*. Eldest son of Carter Glass, dean of the U.S. Senate, he was active in civic and religious affairs and president of the Virginia Press Association. Died Richmond, Va., July 8, aged 59.

Goddard, Dr. Robert H. Scientist. His early experiments in rocket propulsion led to the completion of the jet-propelled plane and the "bazooka." Professor of Physics at Clark University until 1942, when he was employed to direct research on jet-propelled aircraft. Died August 10, Baltimore, Md., aged 63.

Goebele, Paul Joseph. Nazi minister for propaganda and national enlightenment. Took his doctorate in philosophy, 1921, at the University of Heidelberg. Became in-

terested in Nazism, 1924; edited the *Nationalsozialistische Briefe*, a journal run by Gregor and Otto Strasser, who were also in charge of the Nazi party in northern Germany. Met Hitler, 1926, abandoned his earlier, left-wing ideas and, 1927, founded his own newspaper *Der Angriff*. District party leader in Berlin, 1926. Elected to the Reichstag, 1928, and made propaganda leader, 1929. Helped to plan and execute the Reichstag fire in February, 1933. In November of the same year, organized the National Kultur Chamber, by which he extended his controls to include virtually the entire cultural life of Germany. Became a member of Hitler's Cabinet Council, 1938, and in 1944 was Reich trustee for total mobilization for war. His suicide at the age of 48 is thought to have taken place on or about April 29 in Berlin.

Gorrell, Col Edgar S. (1891-1945). Pioneer in aviation. President of Air Transport Association of America, 1936. Died Washington, D.C., Mar. 5.

Gould, Frank M. Vice-president and director of the St. Louis Southwestern Railway Co. Grandson of Jay Gould. Active sportsman; captain in the Army Air Corps, World War II, serving in administrative capacity, Atlanta, Georgia. Died January 13, Oyster Bay, L.I., aged 46.

Gould, Kingdon. Financier. Grandson of Jay Gould. Connected for a time with railroads controlled by his grandfather. Later president of the Arezzo Realty Co., New York City; also a mining engineer, sportsman, and stock broker. Died New York, aged 58.

Granach, Alexander. Polish-born actor. Took the title role in the anti-Nazi play *Professor Mamlock*, of which 300 performances were given in Poland. His first film role in the U.S. was in 1939, when he appeared with Greta Garbo in *Ninotchka*. His last role was that of Tomasino in John Hersey's *A Bell for Adano*. Died New York City, March 16, aged 54.

Grant, Heber J. Religious leader and businessman. For 26 years head of the Church of Jesus Christ of Latter-Day Saints. Once married to three women, he separated from two of them in 1890, when polygamy was forbidden by the Church. Founder and president of the Utah Home Fire Insurance Co., established in 1876, and director of several banks. Died May 14, Salt Lake City, Utah, aged 89.

Hacha, Emil. Former President of Czechoslovakia, succeeding Eduard Beneš, 1938, when the latter's resignation was required by the Nazis. Having ordered his countrymen not to resist the advancing Germans, he was rewarded for his collaboration by being made President of the Protectorate of Bohemia-Moravia. Died in a prison hospital in Prague, June 27, aged 71.

Halsey, Col. Edwin A. Secretary of the U.S. Senate after 1933 and Senate employee for 47 years. Known as "the 97th Senator." Died Washington, D.C., January 29, aged 62.

Hamson, Victor H. Publisher of *The Birmingham News* and *The Birmingham Age-Herald* and chairman of the board for both publications. Died March 7, Birmingham, Ala., aged 69.

Hardeen, Theo. Magician. Brother of the late Harry Houdini. Appeared with brother for many years and later had a part in *Hellzapoppin*, the musical show. President for many years of the Society of American Magicians. Died New York City, January 13, aged 69.

Harmon, Clifford B. Real-estate dealer and aeronautics enthusiast. Served in the Lafayette Escadrille in World War I. Later devoted much of his wealth to the cause of aviation and helped to establish the International League of Aviators, 1925, which has awarded annually the Harmon International Air Trophies for feats in balloons and airplanes. Died June 25, Cannes, France, aged 80.

Hay, Charles M. Former Special Assistant to U.S. Attorney General, to defend Railroad Retirement Act and counsel for Railway Executive Association in regard to legislation affecting retirement and unemployment insurance, and serving as executive director of the War Manpower Commission at time of his death. Died January 16, Washington, D.C., aged 66.

Herring, Clyde I. Governor of Iowa, 1932-36, and U.S. Senator, 1937-42. Supported the New Deal and advocated Federal censorship of radio scripts. President of Herring Motor Co. and the Herring-Wiawler Co. Died Washington, D.C., September 15, aged 66.

Hershey, Milton S. Industrialist. Experienced three failures before making a fortune in the caramel business. Sold this for \$1,000,000 and created out of the profits the Hershey Chocolate Corp., for which he later had constructed the town of Hershey, Pa. A philanthropist, he set up in 1918 the Hershey Industrial School for Orphan Boys, which he endowed with a fund of \$60,000,000. Died Hershey, Pa., October 13, aged 88.

Himmler, Heinrich. Chief of the German Gestapo. Committed suicide on May 23 in Luebnburg, Germany, swallowing cyanide of potassium as he was being examined by a British Army doctor. Arrested a short time before, Himmler was about to stand trial with other Germans charged as war criminals. Born in 1900, he joined the Nazi party, 1925, and was director of propaganda 1928-30. He became leader of the *Schutzstaffel* and a member of the Reichstag, 1930. He was appointed Chief of the

Gestapo, 1936, and in 1939 deputy head of the Reich administration. Shortly before his capture by the British he attempted to negotiate through the Swedish Government a separate treaty of peace which excluded Russia but provided for Germany's surrender in the West to Great Britain and the U.S.

Hitler, Adolf. Born at Braunau, Austria-Hungary, in 1889, of undistinguished parents. Opposed by his father, who refused to permit him to study painting, he was sent to an art school by his mother after the death of his father. Moved on to Vienna two years later, after the death of his mother. Had many disagreements with fellow-workers, most of whom were Socialists, and came under the influence of Karl Lueger, an anti-Semite who was head of the Christian Socialist Party and a strong factor in the early formation of Hitler's beliefs.

Unable to make any progress either in painting or in business, he welcomed the beginning of World War I as an opportunity to participate in the attempt to increase the power of Germany. After the war, during which he received an Iron Cross, he decided to enter politics. Ordered by some officers of the Bavarian Reichswehr to observe the operations of the German Workers' Party, he joined a small group which he attempted to use in an attempt to destroy the government of Bavaria. Sentenced to a term of five years, he served only nine months, in a prison in Landsberg, Germany, where he completed, with the help of Rudolf Hess, *Mein Kampf*. Joined by Goering, Goebbels, von Ribbentrop, Streicher, and Roehm, he formed the nucleus of the Nazi Party and won the support of important politicians, financiers, and industrialists.

Nazism grew swiftly. In 1928 the party had 12 seats in the Reichstag, in 1930, 107, and in 1932, 230. In January, 1933, Hitler was made Chancellor by President Paul von Hindenburg, and in June, 1934, when the Blood Purge took place, he became master of the Nazi Party and of the German state.

Internationally Hitler's progress was equally rapid. In 1935 he ordered the return of the Saar Basin Territory to Germany; in 1936 the Rhineland was retaken and the anti-Comintern pact signed with Japan. In March, 1938, Austria was seized, and in September of the same year, following Hitler's negotiations with Prime Minister Neville Chamberlain, the Sudetenland was given to Germany. In March, 1939, Hitler ordered the seizure of the rest of Czechoslovakia and in April demanded territory from Poland. Then, having formed the Axis with Italy, he signed a non-aggression agreement with Russia. A week later, in September, 1939, the invasion of Poland and World War II had begun.

According to the British report, Hitler committed suicide with his mistress, Eva Braun, whom he was reported to have just previously married, in private apartments in the Reichschancellery, April 30. He is thought to have shot himself and she to have poisoned herself. The bodies are said to have been burned in a nearby garden.

Holsti, Eino R. Finnish diplomat. Delegate to the League of Nations, 1927-40. Secured recognition of Finland's independence at the Paris Peace Conference, 1919. As Foreign Minister after World War I, procured assistance for Finland from Herbert Hoover. He was responsible, 1937, for Finland's resumption of relations with Russia, but in 1939, as Finnish delegate, he helped to effect ejection of Russia from the League of Nations because of her attack on Finland. Forced by the Nazis to leave Finland in 1940, he came to the U.S. and joined the teaching staff of Stanford University. Dr. Holsti is given credit for Finland's punctual retirement of her foreign debts. Died August 8, Palo Alto, Calif., aged 64.

Howe, Dorothy C. Golfer. Only woman to win all four of the most important women's golf championships. champion of Scotland, 1905, 1906, 1908; of Great Britain, 1909, 1911; of Canada, 1910, 1912; and of the U.S., 1909, 1910, 1924. Killed while boarding train, Yemassee, S.C., week of April 2. Aged 61.

Howell, Dr. William H. Scientist. Discoverer of heparin, which is extracted from the liver and used in the prevention of blood-clotting. Formerly dean of the medical school of Johns Hopkins, he later became director of the Johns Hopkins School of Hygiene and Public Health. Died February 6, Baltimore, Md., aged 85.

Hughes, Antoinette C. Wife of Charles Evans Hughes, retired Chief Justice of the U.S. Supreme Court. Member of the D.A.R., of the New York Chapter of the Society of Mayflower descendants, and of the New York Colonial Club. Died December 6, 1945, Washington, D.C., aged 81.

Hughes, Hatcher. Playwright. Became famous 1924 with his *Hell-Bent for Heaven*, with which he won the Pulitzer Prize. Taught playwriting at Columbia University for many years. Other plays: *It's a Grand Life*, *The Lord Blesses the Archbishop*. Died New York, October, aged 64.

Hughes, Mrs. Rupert. Third wife of Rupert Hughes, the writer. Known as an author under her maiden name, Elizabeth Patterson Dial. Died Hollywood, Calif., March 3, aged 42.

Huizinga, Prof. dohan (1872-1945). Dutch educator.

Professor of World History, University of Leyden, 1915. Seized as hostage by the Nazis, World War II. Author of *Erasmus, The Science of History, In the Shadow of Tomorrow*. Reported to have died in Netherlands, Mar. 22.

Hun, Dr. John G. Educator. Headmaster of the Hun School, which he founded in 1914. Former professor of mathematics at Princeton, he specialized in the preparation of pupils for that university. Died Trenton, N.J., September 15, aged 68.

Hunt, Lt. Joseph R. Tennis star. National singles champion in 1943. Finished course at Annapolis 1941. Killed when his plane crashed to the sea near Daytona Beach, Fla., February 2, aged 25.

Hunter, Glenn (1896-1945). Actor. Stage and film star. Outstanding success in *Merton of the Movies*. Died Dec. 30, New York.

Igoe, Bert A. (Hype). Writer and cartoonist for the Hearst newspapers, as a specialist in sports. Known for the accuracy with which he predicted the outcomes of sports events. Died New York, February 12, aged 68.

Jelliffe, Dr. Smith Ely. Psychiatrist and neurologist. Editor of *The Journal of Nervous and Mental Diseases* and of *The Psychoanalytic Review*. Opposed to the imprisonment of the criminally insane. Testifying at the trial of Harry K. Thaw for the murder of Stanford White, he was instrumental in the court's decision to have Thaw removed to a State hospital. Died Huletts Landing, N.Y., September 25, aged 79.

Jenkins, Dr. Burris A. Religious leader and educator. Headed a non-denominational community church in Kansas City, Mo., having served in the ministry for 54 years. Edited and published the *Kansas City Post* and published *The Christian*, a weekly journal. President of the University of Kentucky for 6 years. Died El Centro, Calif., March 13, aged 76.

Johnson, Eldridge R. Industrialist. Founder of the Victor Talking Machine Co. Introduced important improvements in the recording of sound and sold his interest in the business in 1926, reportedly for \$40,000,000. Backed archeological expeditions to Easter Island and Guatemala and gave a fund of \$1,000,000 to the University of Pennsylvania for medical research. Active in the Republican Party, he was the largest individual contributor to the Republican National Committee in 1943. Died Camden, N.J., November 14, aged 78.

Johnson, Hiram W. Statesman. Important figure in American politics since 1912, when Theodore Roosevelt selected him to run for the vice-presidency on the Bull Moose ticket. Republican Governor of California. Elected to the Senate in 1917, where he opposed U.S. participation in international affairs. Fought the Four-Power Pact, the London Naval Treaty, the revised neutrality act, and assistance to Great Britain. Thought to have been chiefly responsible for the failure of Charles Evans Hughes to win the presidency in 1916. In bitter disagreement much of the time with Presidents Wilson, Harding, Coolidge, and Hoover. Supported the late President Roosevelt for a time in some of his policies but broke with him in 1937 over the bill for the reorganization of the Supreme Court. Died Bethesda, Md., August 6, aged 79.

Johnson, William E. Advocate of prohibition. Employed by the U.S. Indian Service, he was nicknamed "Pussy-foot" because of his catlike pursuit of lawbreakers. Went on a world tour in 1919 during which he attempted to win converts to his cause. Died Binghamton, N.Y., February 2, aged 83.

Kaiser, Georg. German novelist and playwright. Pioneer in expressionist drama. Driven out of Prussian Academy of Art, 1933, along with Thomas Mann and Franz Werfel. His plays include *Der Protagonist*, *Adrienne Ambrosart*, and *Morgen bei Mitternacht* (*From Morn till Midnight*), which was produced in New York. Died Ascona, Switzerland, June 5, aged 67.

Kallish, Max. Sculptor. Made reputation 20 years ago with figures of American working men. Engineering and industry the themes which interested him. Typical subjects: the riveter, the telephone lineman, the lumberjack, the foundry worker, the athlete. Chief works: "Man of Steel," National Gallery of Art, Washington, D.C.; "The Christ" and "Torso," Cleveland Museum of Art; "Ecstasy" and "Laborer," Canajoharie (N.Y.) Museum of Art; "Man of Power," Amherst College Museum. Died March 18, New York, aged 54.

Kan-in, Field Marshal Prince Kotohito. Japanese statesman. Member of the Privy Council and honorary president of the Japanese Red Cross. Chief of the Army General Staff, 1931-40. Former president of the Japan-France Institute and of the Japan-Russia Society. Largely inactive or neutral in politics. Close friend of Emperor Hirohito. Died Japan, May 20, aged 80.

Kern, Willard S. Contract bridge authority. Won the national individual title 1931. Won team titles with Hal Sims and others. Known as one of the "four horsemen" of contract bridge. Died New York, April 28, aged 47.

Kaufman, Beatrice B. Writer and wife of George S. Kaufman. Author of two plays, *The White-Haired Boy* and *Divided by Three*. Died New York, October 6, aged 50.

Keane, Doris. Actress. Famous in the role of Margherita Cavallina in *Romance*, 1918. Leading roles in *Romeo and*

Juliet, 1919, and *The Czarina*, 1922. Popular in London and New York. Died New York, November 25, aged 64.

Kemmerer, Dr. Edwin W. Monetary expert. Financial adviser to 14 governments engaged in reorganizing their monetary systems. Known as the "money doctor." Managing editor of *The Economic Bulletin* and president of the Economists National Committee. Walker Professor of International Finance and director of the International Finance Section of Princeton University. Banking expert to the Dawes Committee when it prepared the Dawes plan for handling German reparation payments. Defended gold standard, advocated reduction of Federal expenditure for unemployment relief, and opposed the Bretton Woods monetary proposals. Author of *The ABC of the Federal Reserve System*. President of American Economic Association and member many learned societies. Died Princeton, N.J., December 16, aged 70.

Kern, Jerome. Composer of musical comedy hits since 1912. Best known compositions were "Make Believe," "Smoke Gets in Your Eyes," "The Way You Look Tonight," and "Ol' Man River." Composed scores for *Show Boat*, *The Cat and the Fiddle*, *Muscle in the Air*, and *Roberta*. Several of his songs achieved international popularity. His latest score was for *Can't Help Singing*, with Deanna Durbin. Died New York, November 11, aged 60.

Keyes, Lord Roger. British naval hero. Commander of the Dover Patrol in World War I. Helped to plan and execute the attack on Zeebrugge, Belgium, by which the Bruges Canal was closed. Returned to active service in 1939. Director of Combined Operations, 1940-41, organizer of the Commandos. Member of Parliament, Conservative, 1935-43. Died December 26, Buckingham, England, aged 73.

Kiefer, Commodore Dixie. Naval hero of the Pacific. Executive officer of the aircraft carrier *Ticonderoga* in battle off Formosa. Commodore Kiefer appeared as Captain Dixie in the documentary film, *The Fighting Lady*. Killed November 11 in a plane crash in the Fishkill Mountains, N.Y., aged 49.

Knoblock, Edward. British playwright, born in the U.S., who spent most of his time in England and ultimately became a British subject. His plays include *Kismet*, *Milestones*, and *Grand Hotel*, a dramatization of the novel by Vicki Baum. Wrote numerous films for Hollywood, collaborating with Mary Pickford and Douglas Fairbanks on *The Three Musketeers* and *The Thief of Bagdad*. Died London, August 19, aged 71.

Knobel, Rev. Dr. Frederick H. President of the United Lutheran Church thirteen times in succession. Founder and pastor of the Church of the Atonement and president of the Lutheran World Convention. Died New Rochelle, N.Y., October, aged 75.

Koenigsberg, Moses. Journalist. President of King Features, International News Service, and other Hearst organizations. Received French Legion of Honor Medal 1928. Later resigned positions with Hearst because of latter's ruling that none of his employees might be decorated by a foreign government. Died New York, September 21, aged 67.

Konoye, Prince Fumimaro. Japanese premier. Born in 1891, son of Prince Atsumaro Konoye, of the Fujiwara nobility. At Paris Peace Conference, 1919, as companion of Prince Saionji. Elected president of House of Peers, 1933; Foreign Minister, 1938; Premier, 1937-39, 1940-41. Claimed role of peacemaker. Alleged to have contemplated trip to Moscow last summer to terminate Japanese participation in the war. Poisoned himself December 16, Tokyo. Left note in which he took responsibility for the war against China and declared that he could not endure the disgrace of being tried by an American court.

Kramer, Josef. Nazi commandant of the concentration camp at Belsen, Germany. Sentenced to be hanged, November 17, for murders and atrocities committed under his authority. Sentence executed December 13 at Hameln, Germany.

Krofta, Kamil. Czechoslovakian Foreign Minister, 1936-38. Aide to Eduard Benes; former Minister to Vatican, Austria, Germany. Foreign Minister, 1936-38. Died, August 18, in sanitarium, Prague, after release from Nazi concentration camp, aged 69.

Lake, Simon. Inventor. Developed first modern submarine. Sold submarine to foreign countries because U.S. was not interested until just before World War I. Invented even-keel type of submarine torpedo boat and underwater sea salvage apparatus. Became impoverished, largely because of costly treasure-salvage ventures. Died Bridgeport, Conn., June 3, aged 79.

Lang, Cosmo Gordon. Prelate of Anglican Church. Born Aberdeenshire, Scotland 1901-1908, Bishop of Stepney and Canon of St. Paul's; 1908-1928, Archbishop of York; 1928-1942, Archbishop of Canterbury. Member of the House of Lords and of the royal commission on divorce. Supported the revised Prayer Book and worked for interdenominational unity. Opposed marriage of Edward VIII to Mrs. Simpson, and was believed to have been instrumental in the King's abdication. Died December 5, Richmond, England, aged 81.

Lanier, Charles Day. Eldest son of the poet-musician, Sidney Lanier. Writer, editor, and publisher of *American*

Review of Reviews. President of Mohawk Mining Co. Horseman, gunner, angler, and trainer of sporting dogs. Father elected to New York University Hall of Fame, October, 1945. Died Greenwich, Conn., November 17, aged 77.

Larson, Col. Emory E. ("Swede"). Football coach at Naval Academy, Annapolis, 1938-41. Saw action in Pacific, World War II. Died Atlanta, Georgia, November 7, aged 46.

Laval, Pierre. French collaborationist, executed by firing squad, October 15, in Fresnes Prison, Paris. A few hours before his execution, he attempted to kill himself by swallowing poison, but was resuscitated. Born in 1883, Laval was elected to the Chamber of Deputies as a Socialist, 1914, in 1924, re-elected as a Republican. Held important posts in various cabinets, becoming Premier 1931. Arranged with Pres. Hoover a moratorium on reparations. Concluded with Sir Samuel Hoare an agreement, 1936, the Hoare-Laval Treaty, which ceded Italy a large section of Ethiopia. By 1939 a zealous exponent of peace at any price and of full cooperation with Germany. April, 1942, succeeded Admiral Jean-François Darlan as Premier in the Vichy Government, and maintained a policy of collaboration until his execution.

Laverne, Lucille (1872-1945). Actress. Star of many hits in London and New York. Best known in role of Widow Cagle in Lulu Vollmer's *Sun-Up*. Died Hollywood, Calif., Mar. 6.

Lea, Col. Luke. Industrialist. Controlled many banks and newspapers during the twenties, but suffered severe losses in 1929. Attracted much attention shortly after World War I, when he made an unsuccessful attempt to kidnap Kaiser Wilhelm from Doorn. U.S. Senator at 40. Imprisoned for bank fraud, 1934. Died November 18, Nashville, Tennessee, aged 66.

Lee, Vice Admiral Willis A. With Admiral Marc A. Mitscher, directed attack on Truk and other points in the Carolines. Best known for direction of action off Guadalcanal. With only two battleships and few destroyers, Admiral Lee opposed a Japanese force which, scout planes reported, constituted the entire Japanese fleet. Died August 25, Casco Bay, Me., aged 57.

Lehman, Irving. Chief Judge of the New York State Court of Appeals. Liberal interpreter of the law. President of the Young Men's Hebrew Association. Active in religious organizations. Wrote the unanimous opinion of the court in the case of Carmen Barber, member of Jehovah's Witnesses, who had been convicted by the U.S. Supreme Court of distributing and attempting to sell religious materials without a license. Judge Lehman's decision reversed the conviction. Died September 22, Port Chester, N.Y., aged 69.

Ley, Robert. Violent anti-Semite and former leader of the Labor Front in Germany. Hanged himself in his cell, October 25, while awaiting trial in Nuremberg as a war criminal. Born in 1890, he entered the Nazi Party, 1924, and was placed in charge of the Rhineland. Became a Nazi deputy, 1938, and leader of the party in Munich, 1931. In 1932, succeeded Gregor Strasser in command of the entire organization in Germany, and was elected to the Reichstag. From 1933 on, directed the Labor Front, controlling 25 to 30 million workers and exacting absolute obedience to his orders. Edited *Westdeutscher Beobachter*, organ of Nazism in western Germany. Captured in Austria, May 16.

Liddell, Rev. Eric. Missionary to China. Appeared in the Olympic Games in Paris, 1924. A theology student at the time, he declined to run on Sunday but set a world's record the following Monday, running the 400-meter dash in 47.6 seconds. Died May, aged 44, in a Japanese internment camp.

Lindsay, Sir Ronald. British Ambassador to the U.S. 1930-39. Began career as diplomat in 1905, when he served as attaché. Later served in Istanbul, Berlin, and Washington. Important in securing Anglo-American unity through trade pacts. Died August 8, Bournemouth, England, aged 68.

Lloyd George, David. British statesman and former Prime Minister. Born in 1863 and elected when he was 27 to the House of Commons. A radical opponent of wealth and privilege, attacking royalty, landlords, the liquor interests, capitalists in general, and the Church of England. Chancellor of the Exchequer 1908, when he sponsored the People's Budget, making drastic increases in the taxation of great wealth. Later supported the Parliament Bill of 1911, which limited sharply the power of the House of Lords. Became Prime Minister, replacing Asquith, shortly after the beginning of World War I, when he assumed control of virtually all ministries. Instrumental in the entrance of the U.S. into the war and in the appointment of Marshal Foch as commander of all Allied military forces. Kept in office by a general election which he called for after the armistice, he attempted throughout the treaty settlement at Versailles to mediate between the two extremes represented by Wilson and Clemenceau. At about the same time factions developed within his government over the problems of settling the national strike of 1919 and of removing the threat of war with Turkey. Conferred with Irish leaders in

1921, helping to create the Irish Free State, and retired from office October 19, 1922. A short time before his death he received the title of David, 1st Earl of Dwyfor. Died March 26, Llangatundwy, Wales.

Lopez, Encarnacion (Argentine). Dancer. Born Buenos Aires, educated Spain. Organized the Madrid Ballet, 1932, with the late Garcia Lorca. Famous for performance in *The Three-Cornered Hat*, with Leonide Massine. Appeared in *Priorities of 1942*. Died New York, September 24, aged 47.

Lumsden, Lt. Gen. Herbert (1897-1945). British military leader. Special representative of Great Britain with General Douglas MacArthur. Killed in air attack Jan. 6 on U.S. warship in Pacific.

McCain, Vice Admiral John S. Commanded naval aircraft in the South Pacific, 1942. Later, under Admiral Halsey of the third fleet, in charge of Naval Operation for Air, and the Bureau of Naval Aeronautics Head of Task force 38, he carried war to Japan, approaching mainland at end of war. Died September 6, Coronado, California, aged 61.

McCloy, Lt. Com. John. Naval hero. One of eight men to receive Congressional Medal of Honor twice. Awarded it first for heroism in the Boxer Rebellion, 1900, and second for his bravery in an attack on the Customs House, Vera Cruz, 1914. Aged 69.

McCormack, John. Irish tenor. Born of poor parents, he became most famous of all Irish ballad singers 1907, made debut at Covent Garden in *Cavalleria Rusticana*; first U.S. appearance, 1909, at Manhattan Opera House in *La Traviata*. Later with Chicago Grand Opera Co., Metropolitan Opera Co., Monte Carlo Opera Co. Became U.S. citizen, 1919. Died September 16, Booterstown, near Dublin, Eire, aged 61.

MacDougall, Alice Foote. Operator of restaurants and author of cookbook. Started business with capital of \$38 and developed an organization whose receipts were at one time about \$2,000,000. Entrusted the business to other persons, 1930, under whose management it went into the hands of the receivers in 22 months. Resumed control of the business later, putting it back on a paying basis. Died New York, February 10, aged 78.

MacRory, Joseph, Cardinal. Irish religious leader. Opposed stationing of British and American troops in Ulster during World War II. Defended Irish neutrality and opposed conscription in Ulster counties. Was descended from "the Burderries," an Irish clan whose members revolted against British rule in 1608 and destroyed Londonderry. Died October 13, Armagh, Northern Ireland, aged 84.

Maier, Premier Ahmed (Pasha). Egyptian statesman. Headed the Cabinet, October, 1944, succeeding Mustafa Nahas Pasha, who was removed from office by King Farouk. A moderate in his views, wanting sovereignty but believing that no changes could be made until the end of the war. Shot and killed February 24 in Parliament as he was reading Egypt's declaration of war against Germany and Japan, aged 57.

Mallaby, Brig. A. W. Commander of British troops in Surabaya, Java. Killed October 30, by Indian nationalists as he was about to confer with the leaders.

Maloney, Francis T. Prominent Democrat, Senator from Connecticut. Supported much progressive legislation under New Deal, and shortly before his death prepared a bill intended to improve Congressional procedure. Starting as counterman in a luncheon, he became city editor of the *Meriden Record*, Mayor of Meriden, Congressman, and Senator. Died January 16, Meriden, Conn., aged 51.

Margot, Countess of Oxford and Asquith. British author. Married Herbert Asquith, Prime Minister of England, during World War I and came to know and write about most of the English celebrities of her day. Descriptions of them noted for frankness. Her works included *More or Less about Myself* and *Off the Record*. Died London, England, August 28, aged 81.

Marks, Edward B. Music publisher. President of the Edward B. Marks Music Corp. and publisher of nearly 20,000 songs, including some of the work of Jerome Kern, Sigmund Romberg, and Rodgers and Hart. Most famous were "A Hot Time in the Old Town Tonight," "Ida, Sweet as Apple Cider," "My Gal Sal," and "Parade of the Wooden Soldiers." Died Mineola, L.I., December 17, aged 80.

Mariott, Sir John A. English historian. Authority on the Victorian period and English constitutional law. Member of Parliament, Conservative, and Fellow of Worcester College, Oxford. Works included *Makers of Modern Italy*, *George Canning and His Times*, and *English Political Institutions*. Died Llandindod, Wales, June 7, aged 86.

Mascagni, Pietro. Italian composer. Known mainly for his *Cavalleria Rusticana*. Other works included symphonic compositions and church and chamber music. Other operas were *Iris*, *Le Maschere*, and *Isobel*. Last work, 1935, was *Il Nerone*. Collaborationist under Fascist rule. Died Rome, August 2, aged 82.

Mercer, James (Sid). Writer. Expert on baseball. Columnist on *The New York American*. Founder of Baseball Writers Association of America. Died New York, June 19, aged 64.

Merriam, Dr. John C. Paleontologist. President emeritus of the Carnegie Institution of Washington, of which he had been director for eighteen years. In charge of numerous explorations. Important study of the Mayan civilization in Mexico. Author of many scientific works: *Cave Exploration, Science in Mobilization, Science and Human Values, Ultimate Values of Science*. Died Oakland, Calif., October 30, aged 76.

Monaco, James V. Composer of popular songs. Most recent success was "Six Lessons from Madame La Zonga." Earlier successes were "You're Gonna Lose Your Gal," "If I Had My Way," and "You Made Me Love You." Songs featured in several films. Died Beverly Hills, Calif., October 16, aged 60.

Moncada, Gen. José María. Statesman. President of Nicaragua, 1929-33. Minister of Government, 1944. Died Nicaragua, Feb. 23, aged 76.

Morgan, Dr. Thomas H. Scientist. Research on fruit-fly led to formulation of theory of genes as heredity determinants. Awarded Nobel Prize in 1933 for studies in genetics. Professor of Biology at California Institute of Technology. Author of *Evolution and Adaptation, Experimental Zoology, and Embryology and Genetics*. Died Pasadena, Calif., December 4, aged 59.

Morisco, Oliver. Theatrical producer. Began career as acrobat. Earliest successes were *The Bird of Paradise* and *Peg o' My Heart*. Many productions followed until 1927. Experienced financial reverses and became involved in extensive litigation. Lost fortune and control of theaters in California and New York. Died Hollywood, Calif., August 25, aged 69.

Moses, Sen. John. Senator from N.D. First Democrat to represent this State in the Senate, having defeated Gerald P. Nye in the fall election of 1944. Also Governor of North Dakota three terms. Died Rochester, Minn., March 3, aged 60.

Mussolini, Benito. Italian dictator summarily executed with his mistress, Clara Petacci, and sixteen other Fascists by Partisans, April 28, near Milan. The bodies were removed to a square in Milan, where Mussolini had founded his movement, and two days later were buried secretly in the potter's field section of the Magiore cemetery.

Born in the province of Forlì, Italy, in 1883, Mussolini studied in Switzerland, from which he was expelled because of his radicalism. Edited *Avanti*, Italian Socialist newspaper, 1912-14. Started own newspaper, *Il Popolo d'Italia*, which urged that Italy enter the war on the side of the Allies. After Italy entered the war, he enlisted in the Italian Army, serving as a private until February, 1917, when he returned to his position as editor of *Il Popolo d'Italia*. Campaigned against Communism and organized his *Fascio di Combattimento*, March, 1919. Led his followers in march on Rome, 1922. Asked by Victor Emmanuel to form new government when the Facta Cabinet resigned. Mussolini then assumed control of several ministries, changed the electoral laws, and suppressed all opposition. First crisis June, 1924, when Giacomo Matteotti, a Socialist and virtually the only politician who openly defied the dictator, was kidnapped and murdered by Fascists. Indignation blazed over this murder, but the Duce, after giving the Socialist leader a military funeral, introduced even stronger measures, assuming control of capital and labor, fixing wages and hours, limiting profits, prohibiting strikes, and subjecting professional and agricultural workers to Fascist codes. Signed treaty, 1929, with the Pope by which the sovereignty of the Vatican City was recognized.

Ordered invasion of Ethiopia, 1935, in the face of opposition by Great Britain and the League of Nations, and sent Italian troops to support Franco in Spain. Repudiated the League of Nations, 1937, because it had attempted to impose sanctions against Italy during the Ethiopian campaign. Established a corporative state in Italy, 1937, and discontinued, 1938, the Chamber of Deputies. After Munich, 1938, he joined Hitler, forming the Axis, and the following year annexed Albania.

He declared war against the Allies in June, 1940. A few successes were achieved against the British in North Africa, but by the end of 1942 defeat was imminent. Removed from office July, 1943, as a temporary government, headed by Marshal Pietro Badoglio, prepared to negotiate an armistice with the Allies. Mussolini's escape from jail, with the assistance of the Germans, followed, and his formation of the "Republican Fascist Government." He then had executed Count Ciano, his son-in-law, Marshal de Bono, and others who had been immediately responsible for his downfall. Mussolini was arrested as he was on his way from Italy into Switzerland.

Nemceva, Alie. Russian actress. Born in Crimea in 1879, the daughter of a chemist. Studied music in Switzerland and Odessa, becoming proficient enough to play first violin under Tchaikovsky and Rimski-Korsakov. Interested in the theater when she was seventeen and coached by Stanislavski. First appearance in New York, 1905, following tours of Europe. Signed contract with the Schuberts and given a role in *Hedda Gabler*, in which she was so successful that she was given many other roles in Ibsen and became a leading interpreter of him. Later appeared in films, *War Brides* and *Salome*. Re-

turned to the stage, 1928, in production by Eva Le Gallienne of Chekhov's *The Cherry Orchard* and O'Neill's *Mourning Becomes Electra*. Died Hollywood, Calif., August 13.

Neumann, Wladyslaw. Polish statesman and Minister to Mexico. Minister to Norway 1931-42, leaving when it was occupied by the Germans and proceeding to London, where he served as Minister from the Polish Government-in-Exile to the Norwegian Government-in-Exile. Appointed to his post in Mexico 1942. Died New York, January 24, aged 52.

Neurath, Dr. Otto (1882-1945). Viennese sociologist. Inventor of the isotype method of presenting statistics. Editor of *The International Encyclopedia of Unified Science*. Died at Oxford University, England, Dec. 22.

Newberry, Truman M. Secretary of the Navy under Theodore Roosevelt. Elected to Senate 1918 over Henry Ford. Convicted of electioneering but acquitted by Supreme Court. Resigned seat in Senate. Died Grosse Point, Mich., aged 81.

Nichols, John C. Vice-president of Transcontinental and Western Airlines, Inc. Congressman from Oklahoma, 1935-45. Manager of international operations for T.W.A. Killed, Nov. 7, while making a survey flight from Asmara, Eritrea, to Addis Ababa, Ethiopia. His plane, an Army B-25, crashed. Aged 49.

Noek, Albert Jay. Critic, essayist, historian. Edited *Freeman* magazine and contributed many articles to the *Atlantic Monthly* and the *American Mercury*. Trenchant critic of the New Deal. Disliked labor unions, universal suffrage, free public libraries, newspapers, and other expressions of democracy. Author of *Our Enemy the State* and *Memoirs of a Superfluous Man*. Died Wakefield, R.I., August 19, aged 72.

Norfolk, Dowager Duchess of (Gwendolen Mary). Mother of present Duke of Norfolk, Parliamentary Secretary of Foods during World War II. Startled England, 1929, by attempting to exact feudal payments from tenants living on her property in Scotland. Died August 28, aged 68, on her estate near Gretna Green, Scotland.

Norris, Charles G. Novelist. Husband of Kathleen Norris, writer of numerous best-sellers. An internationalist in foreign affairs and a Republican, whereas his wife was an isolationist and a Democrat. Author of several novels, most of them controversial in subject matter. *Brass, Seed, Bread, Bricks without Straw*. Died Palo Alto, Calif., July 25, aged 64.

Norton, William W. Publisher. President and editor in chief of W. W. Norton & Co., Inc. Specialized in textbooks until 1927, when he began to include books on art, architecture, and literature. Best sellers handled by the company were *Mathematics for the Million*, *An American Doctor's Odyssey*, and *Burma Surgeon*. Fiction published after 1929. Died New York, November 7, aged 54.

Noyes, Alexander D. (1862-1945). Journalist. Financial editor of *The New York Times*. Author of a financial history of U.S. Believer in "sound money." Died Apr. 22, New York.

O'Hara, Fiske. Singer and actor. Appeared in *Robin Hood* and many other Broadway productions. Acted in films, having a part in *Change of Heart*. Best known for his rendition of Irish ballads. Died August, Hollywood, Calif., aged 67.

Oreamuno, Ricardo J. Statesman of Costa Rica. Held many important posts in diplomacy and in various departments of the government. President of the Congress of Costa Rica and of the Supreme Court. Elected President of Costa Rica in 1910, 1924, and 1932. Died San José, Costa Rica, January 4, aged 85.

Oumansky, Constantine. Soviet Ambassador to Mexico and Central America and formerly Ambassador to the U.S., 1939-41. Veteran of the revolution of 1917. Position in the U.S. complicated by the Russo-Finnish war. Sent to Mexico to win good will and recognition for the Soviet Union from the Latin American nations. Killed in plane accident in Mexico City, January 25, aged 43.

Partridge, Sir Bernard. British cartoonist for *Punch*. Joined the staff of the magazine 54 years ago. Quiet humor and forceful, realistic drawing. Had worked in water color and oils. Knighted, 1925, for his work. Professor of Anatomy at the Royal Academy. Died London, England, August 10, aged 84.

Patch, Lt. Gen. Alexander M. Commander of the U.S. Seventh Army in France and Austria. Led troops, 1943, in the Guadalcanal campaign. Just before his death he was appointed head of a board to determine the size and nature of the postwar forces of the U.S. Died San Antonio, Texas, November 21, aged 56.

Patton, Gilbert (Burt L. Standish). Author of the Frank and Dick Merriwell books, adventure stories for boys. Total writings thought to approximate 40 million words. Sold first story when he was 17 and found position with a firm of "pulp-fiction" publishers. Sold the Merriwell stories outright to Street and Smith, none bringing more than \$150. In financial difficulties, 1940, and joined son in California. Completed, 1941, *Mr. Frank Merriwell*, a novel which described his hero as a man advanced in years. Died Vista, Calif., January 16, aged 49.

Patton, General George, Jr. Military leader. Won great fame as Commander of the Third Army in Africa,

France, and Germany. Born in 1885, he entered Virginia Military Institute when he was 18 and proceeded to West Point one year later, joining the cavalry after graduation from the Academy. Early advocate of the tank, he put his ideas into practice during World War I by establishing at Langres, France, a tank school for the training of American soldiers. Then led the 304th tank brigade in the St. Mihiel and Meuse-Argonne offensives. Between the wars advanced from captain to major-general. Dispersed the Bonus Army in Washington, 1932. Trained the Second Armored Division, 1940. Placed in charge of the First Armored Corps, and leader of the Second Corps in French Morocco, November, 1942. Led the Seventh Army to victory over the Germans in North Africa, 1943. Widely criticized, November, 1943, for slapping a soldier suffering from battle fatigue. Later made public apology for action.

He was made Commander of the Third Army, in Normandy, shortly after D Day. Led his troops across France to Metz and the Moselle River, 1944. Brought his troops up from the south to remove the dangerous German salient in the Ardennes.

He was relieved of his command of the Third Army, October, 1945, because of his disposition to use former Nazis as administrators. On December 9 his sedan collided with an Army truck just north of Mannheim, Germany, and he suffered a broken neck. His death, resulting from congestion of the lungs, took place December 21 in an Army hospital in Heidelberg. He was buried at Hamm, Luxembourg.

He had led his troops through six countries and across six major rivers and had been responsible for the capture of approximately 750,000 Germans and for the death or incapacitation of about 500,000 more. A daring tactician, he planned his campaigns carefully and took care not to expose his troops unnecessarily.

Pavolini, Alessandro. Italian Secretary of State, executed with Mussolini on April 28 by the Partisans. A veteran of the party, he had participated in the march on Rome in 1922, and was Secretary of the Fascist Provincial Confederation, President of Confederation of Fascist Professions and Arts, President of the National Institute for Cultural Relations with Foreign Countries, and, 1939-43, Minister of National Enlightenment. His function here was similar to that of Joseph Goebbels under Hitler in Germany, to suppress individual opinion and force the press to publish only the government's interpretation of news. Aged 42.

Pendergast, Thomas V. Democratic politician from Missouri, son of Irish immigrants. Starting as cashier in a saloon, he progressed from small posts in the local government to the position of "political boss." Controlling patronage, his authority in the State of Missouri was virtually unquestioned. In 1939, the Federal Government found him guilty of tax evasion to the extent of \$443,550; sentenced to a term of one year and three months in Leavenworth Penitentiary, he was released under probation, 1940, having served a year and a day of his sentence. His political organization, which his nephew attempted to maintain, retained only a fraction of its original power. Credited with starting the career of President Harry Truman. Died January 26, Kansas City, Mo., aged 75.

Phippis, Sir Eric (1875-1945) British statesman. Ambassador to Germany, 1933-37, to France, 1937-39. Early prophet of war with Germany. Died London, England, Aug. 13.

Pratt, Frederic B. Brooklyn educator. For many years head of Pratt Institute, established by his father, Charles Pratt, co-founder with John D. Rockefeller, of the Standard Oil Company. Established Museum of Science and Industry at 30 Rockefeller Plaza, served as president 1928-35. Active in real estate and a member of many societies. Died Glen Cove, L.I., May 3, aged 80.

Pratt, Herbert L. Sportsman and multimillionaire. Formerly chairman of the board, Socony-Vacuum. Started as clerk with the Standard Oil Co. Advocated improvement of working conditions by means of pensions, insurance, and shorter hours for the employees. Died February, New York, aged 74.

Pueyrredon, Honorio. Argentine statesman. Former Foreign Minister and Ambassador to Washington. Foreign Minister under President Hipolito Irigoyen during World War I. Helped to maintain Argentine neutrality throughout. Headed Argentine delegation to the sixth Pan-American Congress at Havana, Cuba, 1928, withdrawing because the Congress refused to adopt a reciprocal tariff proposal of Irigoyen. Defeated as Radical candidate for Governor of the province of Buenos Aires, 1935. Died Buenos Aires, September 23, aged 73.

Pyle, Ernie. War correspondent and columnist; Pulitzer Prize winner. Killed instantaneously by machine gun fire on Ie Shima, about 8 miles west of Okinawa. Born in 1900 on a small farm in Dana, Indiana, he left home at 18 to enter the School of Journalism at Indiana University. Leaving in his last year, he worked on several newspapers and in 1925 married Miss Geraldine Siebolds. Worked successively on the N.Y. *Evening World*, the N.Y. *Post*, and the Washington *Post* on which he became managing editor. Assigned to conduct Heywood Brown's column in the latter's absence, Pyle wrote simple, chatty descriptions

of auto tours which he had taken with his wife and so impressed the editor in chief that he was assigned to travel about the country and record his observations. Went to England, 1940, and described the British reaction to the war. In Africa he began to achieve his reputation as an interpreter of the ordinary soldier. Covered action in Italy, France, Germany, and became enormously popular. His style was simple, direct and sincere; his observations accurate; his point of view humble and sympathetic. His death occurred April 18. Best known works are *Ernie Pyle in England*, *Here Is Your War*.

Pyle, Geraldine Siebolds. Widow of Correspondent Ernie Pyle. She accompanied him before the war in all his travels as a roving reporter. Married 1925, they were divorced 1942, and remarried in 1943. Died, November 23, Albuquerque, New Mexico, aged 45.

Quisling, Vidkun. Former Premier of Norway. Gave the new term of opprobrium, quisling, to modern languages. Executed by a firing squad in Askershus Fortress, Oslo, October 24, at the age of 58. Sentenced to death by the Norwegian Supreme Court on 24 counts which included embezzlement, murder, and military and civilian treasons. A diplomat 1918-80. Political career began with appointment, 1931, as Minister of Defense in the Farmers' Party Government. Helped to execute the nation's disarmament program. His party lost control, 1936, and he was inactive until 1940, when he was made puppet premier by the Germans. Most important of the court findings was that he plotted with the Germans to accomplish the invasion of Norway. His defense was that if Germany had won the war, Norway would have benefited. He charged that Trygve Lie, Foreign Minister in the Labor Party, had schemed to cede northern Norway to Russia. 1933, established own party, the National Union, whose program included the suppression of Communism and labor unions.

Raizius, Dr. George W. Russian chemist. 1914, formed Dermatological Research and Laboratory Co. with Dr. Jay Frank Schamberg and Dr. John A. Kolmer. Synthesized arsenic bismuth compound used for syphilis. Headed research in dermatology in the Abbott Laboratories, Philadelphia. Responsible for the development of metaphen, a powerful antiseptic, and of diasones, possibly important in the cure of tuberculosis. His research with the sulfa drugs led to their general use in medicine. Died July 16, Atlantic City, N.J., aged 61.

Ramsay, Admiral Sir Bertram H. British naval hero. Allied Naval Commander in Chief since 1944. Helped Admiral Sir Andrew Brown Cunningham to plan the sea invasion of Africa, and planned the sea invasions of Sicily and France. Organized the fleet to rescue approximately 390,000 soldiers at Dunkirk and later cleared the port of Antwerp to speed aid to the troops in France. Killed in plane crash on trip to London, January 2, aged 62.

Rand, Dr. Edward K. (1871-1945). Educator. Professor Emeritus of Latin at Harvard College. Internationally known authority on the classics. Died Cambridge, Mass., Oct. 28.

Randall, Rear Admiral Albert. Former captain of the Leviathan and the Manliathan. Noted for numerous rescues at sea. Retired 1939 after 40 years of service, but appointed commandant of the U.S. Maritime Service when World War II began. Died December 1, Bethesda, Md., aged 66.

Randall-MacIver, David (1873-1945). Archeologist and author. Explorations in Egypt, South Africa, and Italy. Author of *Villanovans and Early Etruscans, Italy before the Romans*, and *Greek Cities in Italy and Sicily*. Died New York, Apr. 30.

Rapes, Erno. Director of music at the Music Hall, Radio City. Born in Hungary, 1891, where he began a career in music as pianist. Came to U.S. 1912. Conducted at the Fox Theater in Philadelphia and at the Rialto, Capitol, and Roxy Theaters in New York. Composer of songs: "Diane" and "Charmaine." Director of music for Warner Brothers and the National Broadcasting Co. Awarded the Mahler Medal of Honor for conducting of Mahler's Eighth Symphony. Died New York, June 26.

Reid, Frank R. Congressman from Illinois, 1923-34. Defended unsuccessfully the late Brigadier-General William Mitchell when the latter was court-martialed for criticism of naval and military aviation. Died Aurora, Illinois, January 25, aged 66.

Reinhardt, Paul. Art dealer and head of the Reinhardt Galleries, N.Y. His most successful one-man show was an exhibition of the work of the Spanish painter, Zuloaga, which was seen by approximately 70,000 persons. He was the first American dealer to give Marc Chagall, the Russian painter, a chance to exhibit his work in a gallery. Died New York, January 13, aged 56.

Ricci, Renate. Fascist editor and writer. Executed on or about April 28, near Milan. Served under Gabriele d'Annunzio when the latter seized Fiume, 1919. Head of *Il Babuino*, a Fascist youth organization, and Minister of Corporations, 1939-40. In charge of the Republican Fascist Militia, 1943, aged 49.

Roosevelt, Franklin Delano. 32d President of the U.S., he had begun his fourth term in office at the time of his death. Born in Hyde Park, N.Y., Jan. 30, 1882, he attended Groton, and Harvard University, receiving his A.B.

in 1904. Married in 1905 to his sixth cousin, Anna Eleanor Roosevelt, he completed his studies at Columbia Law School and passed the bar examination in 1907. Served as State Senator 1910-13, when he opposed the power of Tammany in New York politics, and as assistant secretary of the Navy, 1913-20. Stricken with poliomyelitis August, 1921, he made a slow recovery, finally discarding crutches and moving about thereafter with the aid of canes and braces. Returned to politics 1924, when he became a prominent figure in the Democratic Party. Elected Governor of New York 1928, serving in that position until 1932. Secured the creation of the St. Lawrence Power Authority.

Elected President 1933, when the nation was in the severest depression of its history, he initiated many legislative and administrative reforms. These included the bank holiday and emergency banking controls, legislation for the repeal of prohibition, and a farm-subsidy measure under which the Agricultural Adjustment Administration was set up. Other laws established the Civilian Conservation Corps, the Tennessee Valley Authority, the Securities and Exchange Commission, the Home Owners' Loan Corp., an expanded Reconstruction Finance Corp., the National Recovery Administration, the Federal Emergency Relief Administration, the National Youth Administration, and the Works Progress Administration. The climax of his period in office took place in his third term, with the entrance of the U.S. into World War II. Mobilizing the nation for war took the place of the problem of restoring it to prosperity. At the time of his death victory was almost at hand.

Mr. Roosevelt died April 12 in his home at Warm Springs, Georgia, of a cerebral hemorrhage. He was buried April 15 at his estate, Hyde Park, N.Y.

Rose, Maj. Gen. Maurice. Commander of the U.S. Third Armored Division. Fought in Africa, Sicily, and Italy. Helped to break a German counterattack in Normandy, closed the gap at Argentan-Falaise, and later led his men through the West Wall. Repeatedly distinguished for bravery and inspiring leadership. Killed in action near Paderborn, Germany, March 30, aged 48.

Rothenstein, Sir William. English writer and painter. Principal of the Royal College of Art, 1920-35 and attached to the Royal Air Force, as unofficial artist, since 1939. Painted celebrities and wrote memoirs *Men and Memories since Fifty*, containing anecdotes about well-known people, such as Pablo Picasso, Albert Einstein, and H. G. Wells, with whom he was acquainted. Died Stroud, Gloucestershire, England, February 14, aged 73.

de Rothschild, Baroness Nelly. Member of the famous banking family. Prominent in French society before leaving France to escape the Nazis. Active in charities, she was serving as a nurse in a New York hospital at the time of her death. Died New York, January 8, aged 58.

Rupertus, Maj. Gen. William H. Military leader. Commandant of Marine Corps Schools at Quantico, Va. Served in the Solomons and Palau islands during World War II. Received Navy Cross from Admiral Chester W. Nimitz and Distinguished Service Medal from General Douglas MacArthur. Died Washington, D.C., March 25, aged 56.

Russell, Dr. James E. Educator. Instrumental in the merger of Teachers College and Columbia University. Raised standards of teacher education and introduced scientific methods. Professor of education at Teachers College, 1897-1927, and dean emeritus at his death. Directed its growth from a private, normal school, with an enrolment of 169, to a college of 5,000 students and a staff of 250, with an endowment, 1927, of \$3,000,000. Author of *The Extension of University Training in England and America*, *German Higher Schools*, *The History, Organization, and Method of Secondary Education in Germany*, *Trends in American Education*. Died Trenton, N.J., November 4, aged 81.

Ryan, Msgr. John A. Roman Catholic educator. Appointed Domestic Prelate 1933 by Pope Pius XI. Professor of moral theology and sociology. Catholic University, Washington, 1915-39. Director of social action of National Catholic Welfare Conference. Advocate of child labor legislation, minimum wage laws, and collective bargaining. Supporter of the late President Roosevelt. Author of *A Living Wage*, *A Better Economic Order*, and *Distributive Justice*. Died St. Paul, Minn., September 16, aged 76.

Salten, Felix. Viennese essayist, playwright, and novelist. Fame in the U.S. based on stories of animal life, best known of which, *Bambi*, was made into an animated cartoon, 1942, by Walt Disney. Other works: *The City Jungle*, *Florian*, *A Forest World*. Early in career used as pen name "Martin Funder." Flew from Austria at time of invasion by Germans. Died Zurich, Switzerland, October 8, aged 76.

Sandrich, Mark. Motion-picture producer and director. Directed musical films featuring Ginger Rogers and Fred Astaire. Other films: *Man about Town*, *Skyark*, *Holiday Inn*. Died Hollywood, Calif., Mar. 4.

Sanford, Dr. Steadman V. Educator. Chancellor of the University System of Georgia. Founder and first president of the Southern Conference, an intercollegiate athletic body. Protested against Governor Eugene Talmadge's removal of ten teachers who supported what Talmadge

called racial co-education. Believed in limited assistance to college athletes. Died Atlanta, Georgia, September 15, aged 74.

Schelling, Dr. Felix E. Scholar. Authority on the Elizabethan period. Professor of English literature at the University of Pennsylvania, 1893-1929. His works include: *The English Chronicle Play*, *History of Elizabethan Drama*, *The English Lyric*. Died Mt. Vernon, N.Y., December, aged 87.

Schrems, Archbishop Joseph. Religious leader. Born in Bavaria. Head of the Roman Catholic diocese in Cleveland. Writer of hymns. Emphasized responsibilities of the priest in secular affairs. Outspoken opponent of Prohibition and supporter of the late President Roosevelt in many of his policies, until 1940. Died Cleveland, November 2, aged 79.

Scorza, Carlo. Fascist editor and publisher. Executed with Mussolini, April 28, near Milan by Partisans. Founder and editor of *Il Popolo Toscano*. Organized shortly after World War I a corps of desperadoes whom he placed at the service of Mussolini when the latter was about to march into Rome. Member of the Grand Council of the Fascist party and Director of the State Press Department. Appointed Secretary-General of the party, 1943, in which position he was required to eliminate discontent over failure to prosecute the war successfully, aged 64.

Seabrook, William. Author. Wrote *The Magic Island* and *Jungle Ways*, in which he told, respectively, of his adventures among the voodoo worshippers of Haiti and the natives of Africa. Best known for *Asylum*, 1935, in which he described a cure that he took for alcoholism. Died Rhinebeck, N.Y., September 20, aged 59.

Seredi, Justinian, Cardinal. Roman Catholic Primate of Hungary and Archbishop of Esztergom. Active opponent of Nazism in Hungary. Seized as hostage by the Nazis shortly before the Soviet armies took Budapest. Death reported to have taken place April 13, aged 61.

Sert, José Maria. Spanish painter. Supporter of Franco and attaché for a time in the Spanish embassy to the Vatican. His murals appear in the Council Room of the League of Nations, Geneva, in the lobby of the R.C.A. building, Radio City, N.Y., and in the Sert Room of the Waldorf-Astoria, N.Y. Succeeded Diego Rivera in the work of decorating the R.C.A. building when the latter included a portrait of Lenin in one of his panels. Died Barcelona, Spain, November 27, aged 69.

Shaposhnikov, Marshal Boris. Russian military leader. Colonel in the army of the last Czar. Became Chief of the Soviet Supreme Military Academy, Vice-Commissar of Defense, and military adviser to Joseph Stalin. Directed the conclusion of the Finnish campaign and, as Chief of the General Staff, the first year of the war with Germany. Death reported from Moscow, March 27, aged 63.

Scherbakov, Alexander S. Soviet leader. Member of the Communist Party's political bureau, Secretary of the Central Committee, and head of the Red Army's Department of Politics and Information. Credited with building high morale and for maintaining discipline of troops and officers. Died Moscow, May 7, aged 44.

Shear, Dr. Thomas Leslie. Archeologist on staff of Princeton University. From 1931-39, directed excavations in ancient Athens. His many researches extended knowledge of the ancient world. Belonged to many societies. Died July 3, Lake Sunapee, N.H., aged 65.

Sheehan, Winfield R. Motion-picture producer. Helped to establish the Fox Studios in 1914 and produced *What Price Glory*, *Cavalcade*, and *Captain Edads*. Discovered such stars as Janet Gaynor, Shirley Temple, and Spencer Tracy. Left Fox in 1935, when the firm was merged with 20th Century into the 20th Century-Fox Film Corp. Died Hollywood, Calif., July 25, aged 62.

Siloti, Alexander. Russian pianist. Student of Franz Liszt. On the staff of the Juillard School, 1924-42. Formerly conducted the Moscow Philharmonic Orchestra. Died New York, December 8, aged 82.

Simmons, William J. Leader in fraternal orders, preacher, and salesman. Started modern version of the Ku Klux Klan, 1915, with himself as first Imperial Wizard. Resigned 1923, claiming to have increased membership to five million. Other orders in which he was active were the Knights of the Kamelia and The White Band. Died Atlanta, Georgia, May 18, aged 75.

Slesinger, Tess. Author. Best known for *The Unpossessed*, a satire on people living in the Greenwich Village section of New York City. Wrote for Hollywood the scripts of *The Good Earth* and *A Tree Grows in Brooklyn*. Died Los Angeles, Calif., February, aged 40.

Smith, Lady Eleanor. British novelist. Daughter of the first Earl of Birkenhead. Author of gipsy and circus stories. Works: *Life's a Circus*, autobiography, *Red Wagon*, and *Flamenco*. Died October 20, London, England, aged 43.

Solari, Marcello. Italian Minister of the Treasury. Retired from politics for twenty years, during the Mussolini regime. Active supporter of the parliamentary system against Fascism. Returned to public life, 1944, becoming a member of the Cabinet under Ivanoe Bonomi. Died July 23, Turin, Italy, aged 63.

Southworth, Maj. William B. Baseball player and son of Billy Southworth, former manager of the St. Louis Cardi-

nals. Maj. Southworth was killed when the B-29 which he was piloting crashed in Blushing Bay, N.Y. He was 27 years old when his death occurred, February.

Sperry, Edward G. Industrialist. Vice-president, director, and treasurer of Sperry Products, Inc. an offshoot of the Sperry Gyroscope Co., founded by Mr. Sperry's father, the late Dr. Elmer A. Sperry. During World War II his company produced special parts for ordnance and rail-flaw detector cars, used in the examination of railroad tracks. Died Glen Cove, L.I., November 6, aged 54.

Starace, Achille. Fascist politician. Executed by Partisans near Milan, April 28. Secretary-General of the Fascist party, 1931-39. Chief of Staff of Fascist Militia, 1939. His function was largely to maintain loyalty and obedience to Mussolini and to impress the people with demonstrations of the power and authority of Fascism. Aged 56.

Stebbins, Dr. George C. Author of hymns and choir director. Composed for Dwight L. Moody, the evangelist. Best known hymn: "There is a Green Hill Far Away." Died Catskill, N.Y., October 6, aged 99.

Stephanie, Princess. Daughter of Leopold II, King of Belgium. Her husband, Crown Prince Rudolph, was the son of Emperor Franz Joseph and the principal figure in the perennially discussed Mayerling affair. 1900, married Count Lonyay, a Hungarian. Full name. Princess Stephanie Clotilde Louise Herminie Marie Charlotte. Died in Hungary, September, aged 81.

Sugiyama, Field Marshal Gen. Japanese statesman and military leader. Commander in Chief of the Japanese Army in North China, 1938-39. Chief of General Staff, 1940-44. War Minister in the cabinet of Premier Kuniaki Koiso, resigning with the government in 1945. Shot himself in Tokyo, September 12, aged 65.

Sybil, Lady Eden. Mother of Anthony Eden, former Foreign Secretary of Great Britain. Dame of Grace of the Order of St. John of Jerusalem. Active in charities. Died June 17, Windelsol, England.

Symons, Arthur. British critic, poet, and translator. A contemporary of Oscar Wilde and Aubrey Beardsley. His translations were influential in spreading the popularity of Verlaine, Baudelaire, Mallarmé, D'Annunzio, and others. Author of *Confessions* (1930), a narrative of his successful attempt to regain his mental health in Italy, 1908-1909. Published many volumes of verse. Prose. *Studies in Two Literatures. The Symbolist Movement in Literature. The Romantic Movement in English Poetry. Dramatic Personae, Confessions.* Died, January 22, Wittersham, England, aged 80.

Szold, Henrietta. Founder of Hadassah, a Zionist organization for women. Supervised for twenty-five years the settlement of Jews in Palestine. Extended medical facilities in Palestine and helped to raise funds. Died February 13, Palestine, aged 85.

Taft, Henry W. Lawyer. Brother of the late William Howard Taft, former President and Chief Justice of the U.S. Served on the Commission for the Reorganization of the New York State Government, on the advisory committee appointed to investigate the New York schools, and on the Committee on Costs of Education, to which he was appointed by Governor Lehman. Trustee of the Mutual Life Insurance Co. and former trustee of the City College of New York and of the New York Public Library. Died New York, August 11, aged 86.

Tardieu, André. Three times Premier of France, he was instrumental in the writing of the Versailles Treaty and was its last surviving French signer. Served as Minister of Liberated Regions, Minister of Interior, Minister of War, and Minister of Foreign Affairs in the Cabinets of Clemenceau, Briand, and Laval. Died September 21, Menton, France, aged 69.

Tatekawa, Lt. Gen. Yoshitsugu. Japanese statesman. Ambassador to Moscow, 1940. Many other posts in diplomacy and government. Military attaché to the Japanese Legation in China and military attaché in London; secretary to the Ministry of War and a member of the Japanese delegation to the Disarmament Conference at Geneva. Died Japan, September 10, aged 65.

Thomas, Sen. John. Anti-New Deal isolationist; leading Republican. Appointed to Senate, 1928, elected same year. Later, 1940, appointed to succeed the late Senator Borah. Re-elected, 1940. Director of several banks and corporations. Member of committees on Banking and Currency, Irrigation and Reclamation, Military Affairs, and Public Lands. Died November 10, Washington, D.C., aged 71.

Thompson, Oscar. Writer and educator. Music critic of *The Sun*. Taught music at Curtis Institute, Philadelphia. Editor in chief of *The International Encyclopedia of Music and Musicians*. Author of *Practical Music Criticism, The American Singer, Debussy: Man and Artist.* Died New York, July 8, aged 57.

Todd, John R. Builder and manager of Rockefeller Center. A lawyer and horticulturist. Died New York City, week of May 21, aged 78.

Tokle, Torger D. Champion ski-jumper. Coming from Norway to the U.S. in 1939, he enlisted in the Army, 1942, and became a citizen in 1943. Killed at the age of 26, March 3, Italy, while leading a platoon across the

Apennines. Made record jump of 289 ft., March 1, 1942, in Pine Mts. of Utah.

Tolstoy, Alexei. Russian author, distantly related to Count Leo Tolstoy and Turgenev. Regarded by many Russians as the best of contemporary Soviet writers. Fled from Russia after the revolution, but permitted to return. Best known works are *The Road to Sufrage* and *Peter the Great*, novels. Also wrote play, *Rasputin*, produced in Berlin, 1917. Died January 23, Moscow, aged 82.

Tolstoy, Count Leo. Sculptor and writer. Third son of the author of *War and Peace*. Exiled from Russia in 1918 as a result of his editorials in *Veritochka* opposing the government, he visited and lectured frequently in the U.S. Died October 18, Halsingborg, Sweden, aged 76. Best known works: *For the Children, Years of Famine, Prelude of Chopin.*

Train, Arthur Cheney. Novelist and lawyer. Famous for his leading character, the shrewd legal operator "Mr. Tutt." Mr. Train performed the unique feat of writing a formal biography of this character created by himself. Works. *Tutt and Mr. Tutt, By Advice of Counsel, The Adventures of Ephraim Tutt, Yankee Lawyer, the Autobiography of Ephraim Tutt.* Died December 22, New York, aged 70.

Traute, Harry. Manager for fifty years of book-match department of Diamond Match Co. Popularized the now universal book matches by placing striking surface outside and reducing size. Once filled single order of 1,000,000,000 books of matches. Died September 7, Seabright, N.J.

Tully, Richard W. (1877-1945). Playwright. Greatest success with *The Bird of Paradise*, which involved him in a plagiarism suit, ultimately resolved in his favor, that lasted for 18 years. Died New York, Jan. 31.

Valéry, Paul. French critic, poet, and philosopher whose writings are difficult and few in number, but widely respected by cognoscenti. Admitted to the French Academy in 1925. Works. *La Jeune Parque, Le Cimetière Marin, Aurore, (verse), Regarde sur le Monde Actuel, Soirées avec M. Teste, (prose).* Died August 20, Paris, France, aged 74.

Van Anda, Carl V. Journalist. Employed as managing editor of the *NY Times*, 1904-25. Under his direction the paper acquired a reputation for presenting the news promptly, accurately, and completely. Noted in particular for his coverage of the Japanese naval victory over the Russians in the Shimonoseki Straits, the sinking of the Titanic in 1912, the discovery of the tomb of Tut-Ankh-Amen, the Byrd and Amundsen expeditions. Died January 28, New York, aged 81.

Van de Water, Virginia Terhune. Author. Sister of Albert Payson Terhune, the writer of dog stories. Wrote numerous magazine stories. Her works include two novels. *The Shears of Delilah and The Heart of a Child.* Died October, Pompton Lakes, N.J., aged 80.

von Mackensen, Field Marshal August. General in the German Army, World War I. Led the Eleventh Army against the Russians and conquered much of Serbia and Rumania. Later placed in command of the Armies of the Central Powers in the Balkans. He had served in turn under Bismarck, Kaiser Wilhelm II, and Adolf Hitler. Petitioned Hitler, 1938, to release Rev. Martin Niemöller from concentration camp. Died near Celle, Germany, November 8, aged 96.

Wainwright, Col. Jonathan M. Cousin of General Jonathan Wainwright. Assistant Secretary of War under Harding. Republican Congressman from N.Y., 1923-31. Withdrew from office because, as an advocate of Prohibition, he disagreed with most of his constituents. 1940, anticipated U.S. participation in World War II and urged universal, compulsory military training for both men and women. Died June 3, Rye, N.Y., aged 81.

Watson, Maj. Gen. Edwin M. Secretary and aide to President Franklin Delano Roosevelt. Served as aide to President Wilson at Paris Peace Conference and as military attaché at American Embassy in Brussels, 1927-31. Accompanied his chief to Yalta Conference, and was stricken aboard warship while on his way home, February 20, Aged 62.

Weber, Orlando F. President of the Allied Chemical and Dye Corp., 1920-34. Helped to found the organization after World War I, as a holding and operating company. Instrumental in the development of the corporation into a \$500,000,000 business. Died New York City, September 6, aged 66.

Werfel, Franz. Austrian author and playwright whose famous work, *The Forty Days of Musa Dagh*, was suppressed by the Nazis. Forced to leave Austria, he settled in Lourdes, France, where he was inspired by the local legend to write *The Song of Bernadette*. The Hollywood film version of this novel won five Academy awards. Died August 23, Hollywood, Calif., aged 55. Other works: *Embezzled Heaven, Jacobowsky and the Colonel.*

Weyerhaeuser, Frederick E. Wealthy lumber dealer. Family much publicized in press, 1935, when his grand-nephew, George Weyerhaeuser, was kidnapped and ransomed for \$200,000. Mr. Weyerhaeuser died St. Paul, Minn., October, aged 73.

Woolsey, John M. Federal judge. Famous for his handling of the obscure law on obscenity. Responsible for

the verdict which admitted James Joyce's *Ulysses* into the U.S. He held that the disputed passages of Joyce's work served legitimate esthetic ends and could not be regarded as pornographic. Also passed *Contraception*, by Dr. Marie Stopes. Nominated by President Herbert Hoover as judge in U.S. District Court, Southern N.Y. District. Retired December 31, 1943. Died May 4, New York, aged 68.

Wick, Dorothea. German film star. Performance in *Mädchen in Uniform* gained her fame in U.S. Made two films in Hollywood, but returned dissatisfied to Germany, 1939. Early appearances with Max Reinhardt's Company. Reported a favorite of Hitler. Killed, Dresden, during an air raid, about March 10, aged 37.

Wing, Maj. Gen. Leonard F. Leader of 48rd Division in its campaigns from New Guinea to Manila. Noted as a tactician and a leader who inspired his troops to accomplish impossibilities. Received Distinguished Service Medal. Member of law firm of Fenton, Wing, and Morse. Died December 19, Rutland, Vt., aged 52.

Wirkus, Faustin E. Son of a Polish miner in the Pennsylvania coal regions. Became warrant officer in the Marine Corps. As such, and as officer in the Haitian Constabulary, he governed 12,000 natives of La Gonave in Port-au-Prince Bay. Because of his name (that of an admired Haitian king), the natives created him King Faustin II, the "White King of La Gonave." Died October 8, New York.

Witov, Wincenty. Vice President of the Polish National Council. Assisted in the formation of the present Polish Government. Former head of the Polish Peasant Party, and three times Premier of Poland. With Marshal Josef Pilsudski and Ignace Paderewski, helped to create Polish Republic after World War I. Exiled 1931, by the Pilsudski Government, he returned to Poland 1939, and was imprisoned by the Germans. Died October 31, Cracow, aged 71.

Wolfe, Julia E. Mother of the late Thomas Wolfe, the novelist. Source of encouragement of her son. Managed his estate. Had come from her home in Asheville, N.C., to New York to place some of his work with producers. Died December 7, New York, aged 85.

Wyeth, N. C. Illustrator and painter. Pupil of Howard Pyle. Best known for conception of such figures as Long John Silver, Deerslayer, Odysseus, and Captain Horatio Hornblower. Died October 19, Chadds Ford, Pa., aged 63.

Yeakum, Dr. Clarence S. (1879-1945) Educator. Dean of the graduate school of University of Michigan. Leader in field of applied psychology. Author of *Army Mental Tests and Selection and Training of a Salesman*. Died Ann Arbor, Mich., Nov. 22.

Young, Dr. Hugh H. Surgeon and urologist. 1902, developed new method of excising the prostate gland. Established Brady Clinic, 1903, with funds given by one of his former patients, Diamond Jim Brady. Took part in research which resulted in production of mercurochrome, 1924. Founder and editor of *Journal of Urology*. Died August 23, Baltimore, Md., aged 75.

Zuloaga, Ignacio. Spanish painter of gypsies, bull-fights, and landscapes. Influenced for a time by Gauguin and Lautrec, but in the tradition of Velasquez and Goya. Great richness of color, and dramatic bravura; he was a finished painter. Widely admired are: "*Daniel Zuloaga and His Daughters*," "*Dona Mercedes*," "*Promenade after the Bull-Fight*," "*Gypsy Ball*." Died October 31, Madrid, Spain, aged 75.

NEGROES. In 1945 the Negro in America made considerable progress toward interracial understanding.

Education. Thirty-two of the smaller colleges and schools, supported by gifts and grants solicited from year to year, pooled their efforts in a drive for funds. The General Education Fund appropriated \$1,551,000 to be divided among these schools. The equalization of the salaries of Negro school-teachers was accomplished in more localities in the South.

Pres. James A. Colston, of Bethune-Cookman College, Florida, announced the accreditation of the college by the Florida State Department of Education.

Religion. Dr. Benjamin Mays, president of Morehouse College, Georgia, was elected First Vice President of the American Federation of Churches.

Integration. G. D. Rogers, President of the Central Life Insurance Company, was elected to the Tampa, Florida Chamber of Commerce.

The late Booker T. Washington, scientist, educator, founder of Tuskegee Institute, and author of the classic *Up From Slavery* and the *Atlanta*

Address, was elected to the Hall of Fame by New York University. Negroes and whites of Indianapolis, Indiana, worked hand in hand for the betterment of the community and for race understanding. White children from a New Hampshire community, who had been hosts to Negro children in 1944, were guests of the Negro children in Harlem in 1945.

Zoning. Four Negro citizens of Miami were arrested on the complaint of white property owners for buying property in a white neighborhood. The judge discharged the defendants on the grounds that they were not bound to observe any property-restricting agreements entered into by white owners since there is nothing in the Constitution of the U.S. which permits restrictions on the basis of race. White property owners of Los Angeles, Calif. attempted to eject Louise Beavers, Negro actress, and Noble Sissle, Negro musician, from their properties on the grounds that they were in a white community. This complaint was also ruled against.

Disorders. Northwest Florida produced the only verified case of lynching in the nation for the year. Racial tension, however, appeared in widely-scattered communities. Outbreaks in public schools between white and colored children were reported from Chicago, Gary, New York, Boston, Cleveland, and Youngstown.

Politics. The FEPC failed to become law in the land. Funds for its continuance were voted for one year only, after a furious assault upon FEPC on the floor of the Senate by both Mississippi Senators. It was pigeon-holed for future consideration. The Georgia Supreme Court ruled for the admission of Negroes to the hitherto white Democratic primaries. The Supreme Court of the State of Florida handed down a decision that the Negroes are free to participate in its Democratic primaries.

Walter White, Mary McLeod Bethune, and Dr. William E.B. DuBois were accredited to the San Francisco Conference as Consultants on Race Affairs and as observers. Attorney Irvin C. Mollison was appointed Judge of the U.S. Continual Customs Port at Chicago, Ill.

Sports. Major league baseball signed its first Negro in the person of Jackie Robinson, short-stop, formerly of the Kansas City Monarchs. The owners of the Brooklyn Dodgers bought Jackie Robinson, and he is being farmed out to Montreal for the coming season. Joe Louis, heavyweight boxing champion, signed for a fight with Billy Conn to take place in the spring of 1946.

Theater. Paul Robeson closed his run of nearly three years in *Othello*. *Anna Lucasta*, with an all-Negro cast including Frederick O'Neal, continued on Broadway. *Deep are the Roots*, a dramatization of the problem of the Negro war veterans, opened late in 1945. *Strange Fruit*, a dramatization of Lillian Smith's controversial novel, opened late in 1945. *Memphis Bound*, a swing version of *H.M.S. Pinafore*, with Bill Robinson appeared briefly on Broadway.

Books. The outstanding books by Negro authors in 1945 were *If He Hollers Let Him Go*, Chester B. Hines; *Black Boy*, Richard Wright; *They Seek A City*, Arna Bontemps; *African Journey*, Eslanda Robeson; *Swing Low*, Edwin A. Peeples, Jr.; *Wind is Rising*, Walter White.

Pictures. Lena Horne continued to charm her way along in Hollywood. Hattie McDaniels and others kept before the public eye.

Negro Press and Publications. *Ebony*, a picture magazine similar to *Life*, appeared on the stands late in 1945.

The press publicized charges of discrimination

in the armed forces of the U.S. One of these charges was that Negro soldiers were not being discharged fairly.

The Armed Forces. Many Negro officers from Italy and the Near East gave up their rank during the invasion of the continent in order to join white contingents in the terrible warfare in Belgium and Germany. It was necessary for them to do this if they wished to fight in the already completely staffed regiments of the white divisions, otherwise those units would have been staffed far beyond army regulations. All who survived had their rank restored.

Comments. In race relations, 1945 was a paradoxical year. On the one hand was a more widespread race irritation, and on the other, a greater diffusion of integration and the will to understand. The year was a poor one for the prophets. The terrible and bitter race war that was predicted on the immediate end of hostilities abroad did not come to pass. But neither did the universal lifting of all inequalities, predicted during the war years by some. What has happened has been mostly to the good.

One encouraging sign was the increasingly critical attitude of the commentators and editors of their own groups on both sides of the line. Negroes have questioned and blamed members of their own race for certain things, and whites have accused each other of fomenting trouble. Both sides are beginning to be less sentimental and more realistic. Perhaps the unprecedented contacts in the armed forces as well as in civilian life by the war efforts have borne fruit. They are being recognized and considered by their brothers in white. A greater diffusion and a broader integration into the life of the nation are certainly more evident. From all indications during 1945, it would seem that the broader dissemination of education and preparation among Negroes is making the old order untenable and bringing Negroes and whites nearer to understanding.

ZORA NEALE HURSTON.

NEPAL. A small independent kingdom between Tibet and India, on the southern slope of the Himalayas. The territory includes Mount Everest (29,002 feet). Area, 54,000 square miles. Capital, Katmandu. The government is a military aristocracy based on birth. The king is Tribhubana Bir Bikram, who succeeded his father on Dec. 11, 1911. All power is in the hands of the Prime Minister, a member of the ruling family. This was Gen. Sir Padma Shumshere Jung Bahadur Rana, who succeeded his uncle, Nov. 29, 1945.

The population is estimated at 5,600,000, of whom the majority are Gurkhas, descended from invaders who overran the country in the latter half of the eighteenth century. Gurkha troops fought with the Allies in World War II. Hinduism is gradually replacing Buddhism as the dominant religion. The economy of Nepal depends heavily upon agriculture and animal production. In spite of its mountainous character it is well provided with fertile valleys as well as valuable forests. The principal exports are rice, jute, hides, cattle, lumber, oilseeds, and ghee. It is necessary to import textile and metal products, as well as sugar and salt.

NETHERLANDS. A constitutional monarchy of northwestern Europe. Capital, Amsterdam; seat of the Government, The Hague. Sovereign, Queen Wilhelmina, who succeeded to the throne Nov. 23, 1890, and was crowned Sept. 6, 1898. The country

was invaded by German military forces on May 10, 1940, and remained for the most part under German occupation until May 4, 1945 (see *Events*, below).

Area and Population. The area, including water belonging to municipal territories, is 13,515 square miles. The population on Jan. 1, 1944, was estimated at 9,090,000 (7,935,565 at the 1930 census). About 94 per cent of the people dwell in communities of 2,000 or more. Vital statistics (1943): 22.9 live births per 1,000 inhabitants (21 in 1942), 9.7 deaths per 1,000 (9.5 in 1942). The infant mortality rate (deaths under one year per 1,000 live births) was 38. There were 87,689 marriages in 1942. Estimated populations of the chief cities on Jan. 1, 1939, were: Amsterdam, 793,222; Rotterdam, 612,375; The Hague ('s Gravenhage), 494,773; Utrecht, 163,589; Haarlem, 137,507; Groningen, 120,010; Eindhoven, 111,188; Tilburg, 95,142; Nijmegen, 94,102; Enschede, 90,291; Arnhem, 88,996; Leiden, 77,009. The central section of Rotterdam was completely destroyed by German air attacks on May 14, 1940.

Government. The Constitution of 1814, with its various amendments, vests executive power exclusively in the sovereign while legislative authority rests co-jointly in the sovereign and the States-General (parliament). The States-General consisted of an upper chamber of 50 members, chosen by elected representative bodies in the several provinces for terms of six years; and of a lower chamber of 100 members elected for four years by general adult suffrage. In practice the Cabinet was responsible to the States-General and the Premier was normally chosen by the sovereign from a political group commanding a parliamentary majority. The Premier proposed the members of his ministry to the sovereign. After the liberation of the Netherlands, constitutional conditions, which had been suspended by the invader, were gradually restored, but no new parliament had been elected up to the end of the year.

For the governmental set-up under German rule and the composition of the Netherlands Government in Exile, functioning in London during the war, see *YEAR BOOK* for 1944, pp. 436-437.

Production. Agriculture, manufacturing, commerce, and mining are the principal industries. Yields of the chief crops in 1939 (in metric tons) were: wheat, 416,500; barley, 146,000; rye, 603,500; oats, 449,200; potatoes, 3,000,000; beet sugar (1939-40), 217,600; linseed, 22,500; flax, 21,300. Livestock (1942): 2,440,553 cattle, 491,000 swine, 337,177 horses, and 574,497 sheep. The yield of the sea fisheries in 1939 was 169,900 metric tons, valued at 15,700,000 guilders. The estimated 1940 mineral production was (in metric tons): coal, 13,000,000; pig iron, 300,000; copper, 1,000; zinc (smelter) in 1939, 20,500. The 1939 output of rayon and staple fiber was about 11,000 metric tons; wood and straw pulp, 108,000; butter, 108,400; cheese, 120,600; margarine, 71,000; shipping tonnage launched, 117,000. Bricks, clothing, boots and shoes, engines, boilers, machinery, cotton and linen fabrics, alcoholic beverages, tobacco products, are other leading manufactures.

An official survey of cattle herds made in July 1945 showed an over-all loss in cattle stock of 15.4 percent, but of 21.9 percent in milch cows, as compared with 1940. Cattle numbered 2,277,105, whereof 1,188,212 were cows. Of the prewar stock of 1,553,413 pigs, only 768,733 were left. The country's poultry flock was seriously reduced, from 30,000,000 to about 4,000,000. Coal production, in Limburg province, showed a marked upward

trend in the latter half of 1945; a daily output of 26,000 tons was reached in November.

Foreign Trade. No trade statistics have been published since the beginning of the German occupation. For the volume and distribution of Holland's foreign commerce before the war, see *YEAR BOOK* for 1940.

Events, 1945. The course of events in the Netherlands, in 1945, by and large followed the pattern set in neighboring Belgium. There were the same problems of transition from Nazi vassalage to full independence, the same economic difficulties, the same friction between resistance movement and exiled government, and the same grumbling over the pace of the purge. Unlike Belgium, however, Holland did not go through a dynastic crisis, the return of Queen Wilhelmina and the royal family being accepted as a matter of course by all but a small fraction of the Dutch people.

The Darkness Before Dawn. For the stalwart Dutch, the year opened on a note of stark tragedy. The few months that separated them from victory were among the grimmest in the nation's history. The country was split into two halves, on opposite sides of the firing line. Held on the Maas and Rhine rivers, as a result of the lost Battle of Arnhem (see 1945 Year Book), the Allied armies turned east for the decisive blow at Germany, leaving Holland's richest provinces and most populous cities in the hands of the enemy right up to the hour of final victory.

Piecemeal liberation brought fresh misery and hardships to the Dutch people on either side of the dividing line along the Rhine and Maas. The smaller, southern portion of the country was severely ravaged by the tides of battle. To the north, the food scarcity reached famine proportions, while the Gestapo intensified its terror, and vast sections of fertile land were wantonly inundated by the enemy.

The Germans, already embittered by defeats on all fronts, raged at the aid given to the Allies by the Dutch underground. Prime object of their fury was the prolonged railway strike which crippled all transportation in Northern and Central Holland. Called by the exiled government in September, 1944, in support of the incipient liberation, the strike of the 30,000 railway workers continued without letup, in spite of German threats and reprisals; at least 160 of the strikers were executed.

Unfortunately, the railway strike, while hampering German operations, had also the effect of cutting off Holland's largest cities from desperately needed supplies. In Amsterdam, Rotterdam, The Hague, and other populous centers, food rations dropped far below subsistence levels. From about 630 calories per person at the start of the year, the daily food ration went down to 317 in early February. Thousands died of starvation, while others fell prey to the spread of diseases resulting from famine conditions. After liberation, some 30,000 people in Amsterdam alone were found to be suffering from hunger oedema.

During the first months of the year the Nazis did nothing to relieve the widespread starvation in the so-called "hunger provinces," North-Holland, South-Holland and Utrecht. Only at the immediate approach of defeat did they relent. At the end of April an agreement was reached between the Allied and German commanders on the delivery of emergency food to the civilian population. On April 29 and 30, British and American planes dropped hundreds of "food bombs" containing meat, vegetables, flour, yeast, milk, sugar, and other edibles over the famine-stricken cities. In

two days, 1,850 tons of supplies were dropped. In the following days the quasi truce was enlarged to permit Allied food trucks to cross the German lines with more provisions for the civilian population.

To the emaciated Hollanders, these food bombs truly were "manna from heaven." A few days before the first relief came, the last food ration had been distributed in several large cities. On May 5 all food ration coupons were to become invalid, without replacements.

Meanwhile the Nazi terror continued unabated. On March 8, Dutch patriots shot and wounded the notorious Police General Walter Rauter as his armored car sped through the village of Westhoeve in Gelderland province. In savage reprisal the Germans executed 500 persons, including 70 inhabitants of the little village where the attempt had taken place.

Adding to the heavy blood toll exacted from Holland in the last months of the war, British planes, attacking German V-2 launching platforms at The Hague, on March 3 mistakenly dropped their bombs on one of the most thickly populated sections of the city. The raid caused a veritable catastrophe, with 800 persons killed and over a thousand injured, while 28,000 were made homeless. The British Government offered apologies for the tragedy to the Netherlands Government.

Progress of Liberation. In the initial drive to the Maas and the Rhine estuary, in the fall of 1944, only the provinces of Limburg, Brabant, Zeeland, and parts of Gelderland had been liberated. Although this area for months remained in the operational zone, long-prepared measures for relief and rehabilitation were put in effect immediately.

The worst of the food shortage in the liberated provinces had been overcome by the end of 1944 and progress continued steadily in the new year. By mid-January, the daily food ration in the South had reached 1,600 calories per person and in February it was around 2,000.

Railway facilities, postal service and other essential communications were functioning in most liberated areas early in the year. River and canal traffic, always an important factor in Holland's transportation system, was slower to resume operations, due to the exceptionally severe winter, but in April the inland waterways of South Holland again were alive with hundreds of recovered barges and some larger vessels.

Militarily, the progress of liberation was slow in the first months of the year. An important addition to the freed territory was made on March 2 when the American Ninth Army captured Venlo and Roermond. In mid-April, large areas of northeastern Holland were overrun by Canadian airborne and armed forces. By the end of the month, the German forces had been herded into a large final pocket in Western Holland, centering on the country's chief cities. There, the Nazis hoped to make a last stand, while prolonging resistance in the mountain redoubts of Bavaria and Norway. On April 18, the enemy blew up the great water locks at Muiden, six miles east of Amsterdam, flooding a twenty-mile stretch of lowlands between Amsterdam and Utrecht. Large sheets of water also were created south and west of Utrecht in a desperate attempt to block the Canadians' advance toward the heart of the water-girt "Fortress Holland."

Victory Is Here. The German plans for last-ditch resistance in divers natural "fortresses" were foiled everywhere as the heart of the Reich was crushed by concerted blows from east and west. On May 4

Gen. Dwight D. Eisenhower announced the unconditional surrender of all German forces in Holland. The surrender took place at Wageningen, on the Lower Rhine, where Lt. Gen. Charles Foulkes, commander of the Canadian First Army Corps, dictated terms to Field Marshal Johannes Blaskowitz. It became effective on May 5, at 2 A.M. On May 6 the infamous Nazi commissioner for the Netherlands, Arthur Seyss-Inquart, was captured by the Canadians as he attempted to escape to Germany in a small boat. Anton Mussert, leader of the Dutch Nazis, was also seized.

Despite an urgent warning against "incidents," which the Netherlands Government radioed from London, sporadic clashes occurred. The most serious of these took place in front of the Royal Palace at Amsterdam, on May 7, when drunken German marines opened fire with hidden machine guns upon the celebrating crowds, killing 23 and wounding many more. Utrecht, Rotterdam and The Hague gave the Allied soldiers a riotous welcome. On May 8 General Foulkes announced that the forces under his command had taken complete control of western Holland. By May 14 all German troops in the country had been rounded up for removal to Germany.

Reshuffle and Return of the Government. Like other exiled regimes, the Cabinet of Premier Petr S. Gerbrandy came in for a good deal of criticism from the homefront which grew more outspoken as the moment of total liberation drew near.

As elsewhere, the resistance leaders were somewhat more radically-minded, and especially more severe toward collaborationists, than were the men of the exiled regime. Premier Gerbrandy had repeatedly promised that he and his Cabinet would resign upon liberation of the country, and the resistance leaders continually reminded the Government of this promise. Tension grew when the liberation of a substantial part of Southern Holland failed to bring about the promised resignation, or even a return of the Cabinet from its interim headquarters in London.

The crisis came into the open when the Minister of the Interior, J. A. W. Burger, in a broadcast on Jan. 14, held out the possibility of leniency for collaborationists. Burger's address, made without the Premier's foreknowledge, aroused a storm of protest both inside and outside the Cabinet, leading to his resignation on Jan. 26. This move did not, however, halt the further disintegration of the Government from which the Social-Democratic ministers presently also withdrew. On Feb. 8 the entire Cabinet resigned, but Queen Wilhelmina requested Premier Gerbrandy to form a new one. Composition of the reconstructed Government was announced in London on Feb. 23, the changes being almost wholly of a personal nature, except that the Social-Democrats stayed out of the new combination. On Apr. 6, however, the Cabinet was enlarged to include two prominent leaders of the resistance movement, Dr. Jan Eduard de Quay, who was named Minister of War, and Theodor Philip Tromp, Minister of Public Works.

The new Government was to be of short duration, for within a month the German surrender confronted Gerbrandy with the inescapable necessity of making good his resignation pledge. He did so on May 16, following the Government's return to The Hague. Two days later, Queen Wilhelmina—who, with Princess Juliana, had arrived in Southern Holland on May 3—began consultations with the men of the former underground with a view to forming a Government representative of the resistance movement.

A New Team Takes Over. On May 29 Queen Wilhelmina asked two of the foremost resistance leaders jointly to undertake the formation of a Government of National Reconstruction. They were Professor Willem Schermerhorn, 50-year-old geologist and chairman of the newly founded *Nederlandsche Volks Beweging* (Dutch People's Movement), a merger of democratic and liberal resistance groups; and Willem Drees, 58, an old-time Social-Democratic leader. Both men had remained in Holland throughout the war and occupation and had been in the forefront of underground resistance.

After lengthy consultations, designed to give the Reconstruction Government the broadest possible basis, a new Cabinet was formed on June 23, with Professor Schermerhorn as Premier and Mr. Drees as Minister of Social Affairs. A majority of the other ministers also were drawn from the ranks of the resistance movement. The only holdover from the original Gerbrandy Cabinet included in the new Government was Dr. Eelco Nicolaas van Kleffens who retained his post as Minister of Foreign Affairs which he had held since Aug. 10, 1939, regardless of ministerial shifts. By the retention of van Kleffens, who had headed the Netherlands delegation at the San Francisco Conference—where he strongly upheld the smaller nations' viewpoint—the continuity of Dutch foreign policy was emphasized as much as the Schermerhorn-Drees team gave evidence of a swing to the left from the Gerbrandy line.

After the installation of the new Government, Queen Wilhelmina on July 6 returned in triumph to the Royal Palace at The Hague from which she had been forced to flee on May 13, 1940. A huge crowd cheered the sovereign as she drove to the flower-bedecked palace through streets lavishly decorated with the red, white, and blue national colors and the orange emblems of the Royal House.

Reconstruction Tasks. The job Professor Schermerhorn and his colleagues had on their hands was not an easy one. Holland's once prosperous economy had been brought to fearful ruin. Roughly one-half of the country's livestock had been killed or exported by the Germans. Hundreds of thousands of acres of fertile land lay flooded with salt water, lost to cultivation for years to come. Other vast areas, inundated with fresh water, could be reclaimed sooner but would yield no crops before 1946. The transport system had been thoroughly wrecked and what the bombs and mines had not destroyed was in a sad state of dilapidation. There was an acute shortage of coal and other raw materials.

A comprehensive survey of Holland's material loss resulting from the war, made public in July, reached the staggering total of 15,000,000,000 guilders. Loss of real wealth through destruction, depreciation, disappearance of capital goods, and war claims was figured at 8,000,000,000 guilders; the remainder was accounted for by German exploitation of Dutch production and labor, and the disruption of foreign trade.

The Government's principal preoccupation was to get as much as possible done before another winter set in. Dikes had to be repaired, polders drained, houses patched up. Store shelves were practically bare except for fancy goods. There was a thriving black market in consumer goods, especially clothing.

The food situation improved steadily in the months following total liberation, what with the supplies brought in on Allied ships and the relief given by neutral countries, Sweden in particular. Holland's famed tulip industry reported a quick

return to normal conditions, with exports at the prewar rate of 10,000 tons of bulbs again in full swing by September.

The Purge. According to a statement made on July 13 by a spokesman of the Netherlands Civil Affairs Administration, there were at the time no less than 200,000 persons suspected of some sort of collaboration with the Germans. A majority of these were left in provisional liberty, to be dealt with at a later stage of the purge. There were simply not enough guards to stand watch over all of them, the spokesman declared.

Among the principal quislings and Nazi war criminals arrested after Germany's surrender, in addition to Seyss-Inquart and Mussert (see above), were: Meinoud M. Rost van Tonningen, former head of the Netherlands Bank, and the No. 2 leader of the Dutch Nazis; shortly after his arrest, he committed suicide by jumping from the fourth floor of his prison at The Hague; Max Blokzijl, radio propagandist who was sentenced to death on Sept. 25; A. G. Voûte, quisling burgomaster of Amsterdam; Professor Jan van Dam, Nazi-appointed Commissioner for Education; and the German Gestapo Chief Walter Rauter. Former Premier Dirk J. de Geer, who had led the flight of the Dutch Cabinet to Britain, in May, 1940, but the following year had returned to Holland, also was indicted on charges of collaboration.

On Aug. 4, the government appointed a five-man commission to purge both houses of the prewar Parliament of "those members who have behaved in an unpatriotic manner." After its "cleansing," the Lower Chamber met on Sept. 25 at The Hague in its first session since the Nazi invasion of May, 1940. Among other matters, the House discussed arrangements for an interim Parliament to serve until regular elections could be held. While local and provincial elections in Holland were expected to take place early in 1946, the government was unwilling to hold a national ballot before the second half of that year, in order to give the country more time to get organized.

Anton Mussert was finally brought to trial on Nov. 27, after various postponements. He pleaded not guilty to charges that he deliberately had attempted to bring the Netherlands under German domination, had tried to overthrow the Constitution, and had rendered aid to the enemy. He was sentenced to death on Dec. 12.

Demand for Annexation. A manifesto urging the Dutch people to support "with all forces" demands for annexation of German territory adjacent to the northeastern frontier of Holland, as partial compensation for the damages inflicted on the country by the Nazis' systematic devastations, was made public on Nov. 9 at The Hague.

The manifesto, bearing the signatures of forty prominent Dutch personalities, stated in part: "Germany caused us tremendous spiritual and material damage and if this is not compensated for, it will be impossible to reconstruct a new and prosperous Netherlands. Germany can only do this in the form of soil. Owing to Germany's fault, the problem of overpopulation has become even more acute, since many sources of income have been destroyed. No annexation means that many Netherlands will have to emigrate, with all the bitter consequences of such a step."

The Netherlands Government had previously reserved its right to claim German territories in compensation for the land wantonly inundated by the Nazis, but up to the end of the year no official demand for a border adjustment had been raised. Indications were that the Government would adopt

an expectant attitude until it felt quite sure that a majority of the Dutch population would support the annexation of German territory.

JOACHIM JOESTEN.

NETHERLANDS EAST INDIES. A group of large and small islands in the East Indies forming the main overseas territories of the Netherlands Kingdom, conquered and occupied by Japanese armed forces from 1942 until the surrender of Japan in September, 1945. Capital, Batavia, on the island of Java.

Area and Population. The area, population at the 1930 census, and population density of the island groups are shown in the accompanying table.

Group of islands	Sq. mi.	Population	Density*
Java and Madoera	51,032	41,718,364	817
Sumatra	164,148	7,677,826	47
Riouw-Lingga	12,235	298,225	24
Bangka	4,611	205,363	45
Bulliton	1,866	73,429	39
Borneo:			
West district	56,664	802,447	14
South and East districts	151,621	1,366,214	9
Island of Celebes			
Celebes	38,786	3,093,251	80
Manado	34,200	1,138,655	33
Molucca Is. & New Guinea	191,682	893,400	5
Timor Archipelago	24,449	1,657,376	68
Bali and Lombok	3,973	1,802,683	454
Netherlands East Indies	735,268	60,727,233	83

* Density per square mile.

The estimated population in 1940 was 70,476,000, including 68,832,000 natives. Java and Madoera had 48,416,000 inhabitants; the Outer Provinces, 22,060,000. There were about 250,000 persons classed as Europeans (many had some native blood), including 220,000 Dutch. Chinese numbered about 1,200,000; other alien Asiatics (mostly Hindus and Arabs), 115,000. Over 92 per cent of the population is rural. Chief cities (with latest available populations): Batavia 606,800, Soerabaja (Surabaya) 390,700, Semarang 217,796, Bandoeng 166,815, Soerakarta 165,484, Djokjakarta (Jogjakarta) 136,649, Palembang 109,069.

Education and Religion. According to the 1930 census, there were 4,296,579 literate persons, of whom 400,877 were able to write Dutch. In 1940 there were 17,718 village schools with 1,896,374 pupils, 3,607 other primary schools (public and private) with 467,076 pupils, 41 secondary schools with 8,686 pupils, and various vocational and special schools. Higher education was given in the Technical College, Bandoeng, and in colleges of law, medicine, agriculture, science, literature, and philosophy at Batavia. About 20 per cent of all pupils attended missionary schools.

About 90 per cent of the natives are nominally Mohammedans and there are about 2,500,000 Christians and 1,000,000 Hindus. However all three religions are superimposed upon the prevailing spirit and ancestor worship.

Production, etc. Agriculture and mining are the chief occupations. The islands normally produced the following percentages of the world's annual yields: quinine 90, pepper 79, kapok 70, rubber 38, copra 30, oil palm products 20, tea 17, coffee 6, sugar 5. The islands were likewise a leading source of petroleum and tin. Bauxite, manganese, and coal were other mineral products. In 1941 6,000 factories and workshops were engaged in processing agricultural and mineral products for export. Foreign trade (1940): imports 444,300,000 guilders; exports 873,500,000 guilders (guilder = \$0.53). In prewar times the chief trading countries were: United States, British Malaya, Netherlands, Aus-

tralia, New Zealand, Great Britain, and Japan. Finance (1942 estimates): revenue 750,918,773 guilders; expenditure 813,802,815 guilders. The public funded debt (Jan. 1, 1942) totaled 1,233,839,000 guilders.

Government. Under Dutch rule, the islands were considered an integral part of the Kingdom of the Netherlands. The Government at Batavia handled only local affairs under the guidance of the mother country. There was a Governor General appointed by the Crown, assisted by an advisory Council of the Indies, a cabinet, and a Volksraad (legislative assembly) of appointed and elected members with limited legislative powers. The Netherlands Government appointed the 5 members of the Council of the Indies and 2 (the war and navy ministers) of the 8 members of the Governor General's cabinet.

Events, 1945. The end of the war with Japan brought no peace to Holland's far-flung empire in the East Indies. One after another, the large and populous islands that had been under Dutch rule for more than three centuries raised the standard of rebellion.

From the start, Java was the focus of unrest and the scene of the gravest disorders. Following the surrender of the Japanese forces on the island, native nationalist elements on Aug. 19 proclaimed the establishment of an independent "Indonesian Republic" under the leadership of Dr. Achmed Soekarno, President, and Dr. Mohammed Hatta, Vice-President. Although widely supported by the Javanese population, the move failed to win recognition either from the Dutch Government or from any foreign country.

The Dutch civil administration, which had been reestablished on Sumatra in August, proved unable to cope with the situation on Java. Britain, somewhat reluctantly, promised support and on Sept. 29 British and Indian troops landed at Batavia. The commander of these forces, Lt. Gen. Sir Philip Christison, made it known that he intended to occupy only two cities, Batavia and the important naval base of Surabaya. He also declared that "he did not wish to become involved in internal politics"—an obvious reference to the quarrel between the Dutch Government and the nationalist movement. Christison clearly indicated his desire to see the two parties get together at a round-table conference.

However, on Oct. 1 the Netherlands Government announced its refusal to deal with Soekarno whom it charged with being a tool and puppet of the Japanese. The Dutch press, at the same time, attacked General Christison's conciliatory attitude. It supported the Government's stand that there should be no departure from the policy laid down in Queen Wilhelmina's address of Dec. 6, 1942, in which she offered "complete partnership of the Netherlands Indies in the kingdom and complete freedom regarding its internal affairs." By contrast, Soekarno and his followers declared that they would accept nothing short of complete independence.

From this conflict ensued a long and uneasy stalemate that lasted up to the end of the year, with no early solution in sight. As the British slowly extended their grip on Java and the Dutch trained and equipped in the homeland a task force designed to restore Netherlands administration over the islands, widespread disorders occurred which eventually turned to open warfare.

On Oct. 15, Jonkheer A. W. L. Tjarda van Starkenborgh Stachouwer, Governor General of the Netherlands East Indies, resigned in an unex-

plained conflict of views with his Government. His successor, Dr. Hubertus J. van Mook, sought to make contact with the nationalist leaders but preliminary discussions brought no result, partly because Soekarno had already lost control over the Javanese extremists. These committed many acts of terrorism, including the slaying of hostages, and the murder of a British brigadier, A. W. S. Mallaby, on Oct. 31. In reprisal, the British resorted to such colonial strong-arm measures as the shelling and razing of native villages.

On Nov. 13, Sutan Sjahrir, 36-year-old Socialist leader, became Premier of the unrecognized "Indonesian Republic," while Soekarno retained the post of President, with little more than nominal powers. Sjahrir, expressing conciliatory views, attempted to bring hostilities to a halt, but he, too, was unable to curb extremist attacks on Allied forces and white civilians. On Nov. 29 the British finally captured Surabaya after several weeks of fierce fighting.

Strong extremist forces, however, remained entrenched in the interior of the island, taking little notice of the peace talks intermittently held between Sjahrir and Allied representatives. On Dec. 6 a conference was held at Admiral Lord Louis Mountbatten's headquarters at Singapore, attended by van Mook and Christison among others. It was decided to use strong measures to put an end to the "anarchy and disorders" in Java.

Meanwhile, sniping and skirmishes had also broken out on Sumatra, where all signs pointed to a further development of the crisis in the months ahead. From Bali, and other minor islands, growing unrest was also reported.

On Dec. 12, a dispatch from Batavia forecast "drastic action" by the British within the next two weeks if disturbances continued. Acting Governor van Mook, still hopeful of a peaceful settlement, left for the Netherlands on Dec. 15 to confer with his Government. On the same day, Sjahrir issued a statement declaring that the planned dispatch to Java of 27 Dutch battalions "will only make things worse in a situation which already is most tense."

Comparative quiet settled over Java during Christmas week, as reports from London indicated that the "strong policy" decisions of Singapore might not be endorsed there. A strong impression was made both at The Hague and in London by a statement issued on Dec. 19 in Washington, in which the State Department voiced "increasing concern" over developments in Java and urged all parties to resume negotiations. The United States Government, the statement said, looked toward a "peaceful settlement, recognizing alike the natural aspirations of the Indonesian peoples and the legitimate rights and interests of the Netherlands."

JOACHIM JOESTEN.

NETHERLANDS WEST INDIES. The colonial possessions of the Netherlands in the West Indies, comprising Curaçao and Surinam (or Netherlands Guiana), see below.

Curaçao. A Netherlands colony comprising two groups of islands 500 miles apart. One group just north of Venezuela includes Aruba (69 sq. mi.), Bonaire (95 sq. mi.), and Curaçao (210 sq. mi.); the other group just east of the Virgin Islands includes Saba (5 sq. mi.), St. Eustatius (7 sq. mi.), and the southern part of St. Martin (17 sq. mi.). Total area, 403 square miles. Population (Jan. 1, 1944), 122,540. In 1943 there were 3,893 births and 991 deaths. Willemstad (capital), on the island of Curaçao, had 36,437 inhabitants (Jan. 1,

1944). Chief products: refined oil (from imported crude oil), straw hats, phosphate of lime, and salt. Oil refining is the most important industry. Trade (1943), excluding petroleum: imports were valued at 345,000,000 guilders; exports totaled 298,000,000 guilders. Air services link Curaçao, Aruba, Jamaica, Trinidad, and North and South America. Shipping entered the ports (1941): 6,892 ships of 29,070,521 tons. Budget (1944): revenue 24,954,000 guilders; expenditure 24,942,000 guilders (the exchange value of the guilder was \$0.525 in February, 1943). Curaçao is administered by a Governor, assisted by a council of 4 members, and a States Council of 15 members (10 elected by the voters and 5 nominated by the Governor). Governor, Dr. P. A. Kasteel (appointed May 21, 1942).

Surinam (Netherlands Guiana). A colony on the northern coast of South America, belonging to the Netherlands. Area, 54,291 square miles. Population (Jan. 1, 1943), 186,807, including the Negroes and Indians living in the forests. Chief towns: Paramaribo (capital), 56,233 inhabitants, Nieuw Nickerie, 5,000, Albina, Coronie, and Moengo. Vital statistics (1943): 5,145 births, 2,480 deaths, and 738 marriages. Education (1943): 115 schools and 18,243 students. The principal agricultural products are sugar, rice, maize, coffee, cacao, balata, bananas, oranges, molasses, rum, and timber. Minerals produced included bauxite, gold, and salt. Trade (1943): imports 22,268,102 guilders; exports 14,173,267 guilders. Shipping (1943): 596 vessels of 3,408,941 register tons cleared. Budget estimates (1945): revenue 8,171,000 guilders, expenditure 8,167,000 guilders. The executive authority and administration are under a Governor, assisted by an advisory council. There is a representative body called the States of Surinam consisting of 15 members (5 appointed by the Governor and 10 elected by the voters). Governor (acting), Dr. J. C. Brons (app. Nov. 19, 1943).

NEW BRITAIN. The largest island in the Bismarck Archipelago in the Territory of New Guinea, mandated to Australia by the League of Nations. The island is 300 miles long and has an average width of 50 miles; area, 14,600 square miles. The native population of patrolled areas was 101,373 on June 30, 1940. Rabaul, the capital and chief port and settlement, had a non-native population of 4,674. There are many good harbors, the chief being Linden Haven, Powell Haven, Simpson Haven, Jacquot Bay, and Arawe. See NEW GUINEA, TERRITORY OF.

NEW CALEDONIA. A French island possession in the southwestern Pacific, 850 miles east of Australia. It is 248 miles long and has an average width of 31 miles. Total area (including dependent islands), 7,336 square miles. Population in 1942, 56,000 (20,000 whites and half-castes and the rest Melanesians and Polynesians). Capital: Nouméa (12,000 inhabitants). The dependencies of New Caledonia are: Isle of Pines, Wallis Archipelago, Fortuna and Alofi, Loyalty Islands, Huon Islands, Bélep Archipelago, Chesterfield Islands, and Walpoole. Chief agricultural products: coffee, copra, cotton, manioc, maize, tobacco, bananas, and pineapples. Mineral products include nickel, chromite, cobalt, iron, and manganese. Trade (1938): imports 158,571,000 francs; exports 146,453,000 francs (franc averaged \$0.0288 in 1938; \$0.0251, 1939). The local budget for 1939 was balanced at 44,100,000 francs. A Governor, assisted by a privy council and an elected general council, administers the government. Governor: A. Tallec.

NEWFOUNDLAND. An island lying between the Gulf of St. Lawrence and the Atlantic Ocean. Its dependency, Labrador, lies north of the Gulf of St. Lawrence, between the Province of Quebec and the Atlantic. Newfoundland, with Labrador, forms a part of the British Empire. Area, exclusive of Labrador, 42,734 square miles. Capital, St. John's.

Government. As a result of acute financial difficulties caused by the depression in the fishing industry, Newfoundland's status as a self-governing dominion of the British Commonwealth was temporarily altered in November, 1933, to that of a British colony. The British Government assumed responsibility for Newfoundland's financial obligations and provided an annual grant-in-aid pending restoration of the island treasury's financial solvency. Effective Feb. 15, 1934, executive and legislative authority was vested in the Governor and a Commission of 6—three Newfoundlanders and three British—all appointed by the British Government. Each member of the Commission has charge of a government department. Governor Vice Admiral Sir Humphrey T. Walwyn assumed office Jan. 21, 1936, for a three-year term which was successively extended by one-year terms to Dec. 31, 1945.

Events, 1945. The British Government's intention to set up in Newfoundland in 1946, as early as climatic conditions permit, an elected national convention of Newfoundlanders was announced in the House of Commons by Prime Minister Attlee on Dec. 11. Elections to the convention would be held broadly on the basis of the former Parliamentary constituencies, Attlee said, and all adults would be entitled to vote.

The convention would be presided over by a judge of the Supreme Court of Newfoundland, and its terms of reference would be as follows: To consider, and discuss amongst themselves as elected representatives of the Newfoundland people, the changes that have taken place in the financial and economic situation of the island since 1934, and, bearing in mind the extent to which the high revenues of recent years have been due to wartime conditions, to examine the position of the country and to make recommendations to His Majesty's Government as to possible forms of future government to be put before the people at a national referendum.

The reception of the announcement in Newfoundland was moderately favorable. In general, members of the economically secure classes favored responsible government, partly as a matter of prestige. Members of the middle classes and workers, remembering benefits from the present regime which would not have been gained under responsible government, were less enthusiastic. In such circles the inefficiency and alleged dishonesty of the former government was contrasted with the honesty and impartiality of the Commission. Informal polls of small groups showed either responsible government or commission government as a first choice, with confederation with the United States or Canada as a not unpopular step.

The departure of approximately 15,000 Canadian and United States servicemen by the middle of autumn failed to have the serious economic effect anticipated in some quarters, because of the presence of certain offsetting factors, such as the return of Newfoundland veterans from Europe, in some cases with families, and a high level of industrial activity which in turn maintained employment and purchasing power.

Codfishing, for centuries the sheet anchor of Newfoundland's national economy, was receiving

back many of the men who left fishing in the military-defense construction period 1941-1943. In prewar years as many as 30,000 fishermen were engaged at the season's peak. In 1942 the highest number was about 17,600, but by 1945 it was estimated at 24,000. Late in August the Newfoundland Fisheries Board announced the negotiation of a new contract with UNRRA for 200,000 barrels of hard-cure split herring in the 1945-1946 season. Before the war, herring exports were largely limited to about 20,000 barrels sold to the United States, with small lots to the West Indies and other markets. The UNRRA order was expected to help to make Newfoundland's transition from a prosperous war economy to a peace economy much easier than had been expected. Newfoundland's two pulp and paper mills were operating at capacity in the late summer of 1945, but the outlook had been altered by Great Britain's announcement of a possible curtailment of newsprint imports.

The People. The population of Newfoundland in 1943 was 335,877, as against 289,588 recorded by the census of 1935. The increase was due in large part to the establishment in Newfoundland of Canadian and American garrisons and bases. The inhabitants are mostly of English and Irish descent. Vital statistics for 1940 showed a considerable excess of births (7,937) over deaths (3,547). Labrador, with an area of 118,400 square miles, had a population of 4,716 in 1935.

From 7 to 10 per cent of the adults in Newfoundland are illiterate, but a school attendance act providing for free and compulsory education of children from 7 to 14 years of age, which went into effect in 1942, is expected to improve the situation. The schools (1,151 in 1943) are mainly denominational, but have public support. There are more Anglican schools and more Roman Catholic pupils than of any other single denomination. The census of 1945 showed the Roman Catholic and the Anglican as the leading religious denominations, with the Roman Catholic slightly larger. The United Church and the Salvation Army were the only other large groups.

Cod fishing is the occupation of two-thirds of the working people in normal times, but as products newsprint and wood pulp bulk large. With only 102,000 acres under cultivation, the total value of farm production in 1942 was \$4,600,000. Exports for 1943-1944 were \$44,000,000 and imports \$62,500,000.

ALZADA COMSTOCK.

NEW GUINEA. An island in the East Indies, north of Australia. It comprises Netherlands New Guinea (151,000 sq. mi.), North East New Guinea (69,700 sq. mi.)—the mainland part of the Australian mandated Territory of New Guinea, and Papua (87,786 sq. mi. excluding islands)—a Territory of Australia (formerly called British New Guinea). Total area, 308,486 square miles. Population, approximately 1,000,000. See NEW GUINEA, TERRITORY OF; PAPUA.

NEW GUINEA, Territory of. A territory administered by Australia under mandate conferred by the League of Nations from Dec. 17, 1920; occupied by Japanese armed forces during 1942-43; reconquered (by June of 1944) by the Australian and Allied armed forces. It comprises North East New Guinea (also called the Mainland), 69,700 square miles; Bismarck Archipelago (consisting of New Britain 14,600 sq. mi., New Ireland 3,340 sq. mi., Lavongai 460 sq. mi., and Admiralty Islands 800 sq. mi.), 19,200 square miles; and part

of the Solomon Islands (Bougainville 3,880 sq. mi., Buka and adjacent small islands 220 sq. mi.), 4,100 square miles. Total area, 93,000 square miles. Total enumerated natives in patrolled areas (June 30, 1941), 684,284, including 34,087 indentured laborers; in addition, there were 4,101 Europeans and 2,228 Asiatics. Rabaul (on New Britain), had 10,174 inhabitants in 1939. Chief towns of North East New Guinea: Aitape, Lae (capital of the Territory), Madang, Monumbo, Morobe, Salamaua, Vanimo, and Wewak.

Production and Trade. In 1940-41 the output of gold amounted to 263,097 fine ounces valued at £2,808,835. Platinum, osmiridium, copper, iron, sulfur, and brown coal have been found. The area under cultivation in 1940 (exclusive of native reserves) was 277,533 acres, of which 261,676 acres were devoted to coconuts (71,583 tons of copra produced in 1940), cocoa 5,827 acres, rubber 2,481 acres, and coffee 2,792 acres. Livestock (1939-40): 20,474 cattle, 9,327 goats, 6,160 pigs, 1,184 sheep, and 1,323 horses. Timber and fish are other products. Trade (1940-41): imports £962,129; exports £3,253,984. Shipping (1940-41): 95 vessels aggregating 216,365 tons cleared.

Government. Finance (1940-41): revenue £423,750, expenditure £431,792 (the official exchange rate of the Australian £ was \$3.228 in 1940, 1941, and 1942). In 1945 the territory was under the control of the Australia New Guinea Administrative Unit (Angau.) Administrator: Maj. Gen. J. K. Murray.

NEW PLANTS FOR THE UNITED STATES. Production gains on American farms in the war years resulted from a speed-up in the application of plant-science to agricultural operations, as well as from increased farm mechanization and fuller use of available manpower.

The emergency brought both innovations and greater use of previously available scientific knowledge. Plant-science devoted to the development of important crops gave higher yields, greater resistance to disease, better adaptation of crops to specific requirements, and other advantages. Co-operative work by the Department of Agriculture and state agricultural experiment stations made more than 100 new varieties of crop plants available to growers, in most cases as the fruit of investigations started long ago, but sometimes as the result of emergency experiments.

Conspicuous among the developments with a prewar origin was an increase in the number and usefulness of hybrid corn varieties. Hybrid strains produced by the crossing of inbred lines enabled Corn Belt farmers to grow 20 percent more corn on a given acreage than would have been obtainable from the use of open pollinated varieties. The spread of hybrid corn to the South and other areas began with varieties specially developed for that purpose.

Since 1941 the planting of hybrid varieties has added probably two billion bushels to the quantity that other varieties would have given. Corn in 1945 was a three billion bushel crop for the fourth year in a row; yet the planted acreage was only 94,140,000, as compared with 101,360,000 acres required to produce a three billion bushel crop in 1920, the biggest prewar corn year. Land released from corn went largely into soybean production, likewise from scientifically bred seed. Soybean production jumped from 77½ million bushels in 1940 to nearly 200 million bushels in 1943.

Plant specialists developed the first commercially

feasible onion hybrid. Announced in the spring of 1944, this onion produced yields about 25 percent larger than the best varieties previously grown; moreover, some of the hybrid onions were of giant size—up to 4 pounds. This achievement involved the production of onions with sterile pollen, which could be planted in alternate rows with normal, pollen-producing onions. Seed was collected only from the male-sterile plants. The first hybrid onion released for production is adapted only to the Southwest, but hybrids are being developed for other areas. Moreover, the plant breeders hope by similar methods to develop hybrid vigor in other crops. For example, they have found male-sterile grain sorghums that give promise of facilitating the production of useful hybrids. Alfalfa sometimes produces plants sterile to their own pollen, and consequently favorable for hybridization experiments.

Small grains show the results of wartime efforts to create better varieties for specific areas. These researches have chiefly sought to produce varieties resistant to disease and to insect pests, but other values such as quality and adaptation to farm practices have been developed also. Early varieties of wheat have shown increased power to escape damage. Thus Wichita, a new, very early-maturing variety of hard red winter wheat, has been approved for distribution in southwestern Kansas, western Oklahoma, and northwestern Texas. Besides producing high yields of good quality, heavy grain, it helps by its early maturity to distribute labor through the harvest season. In southwestern Nebraska and eastern Kansas the distribution of Pawnee hard red winter wheat gives high hopes of reducing losses from the Hessian fly.

New rust-resistant varieties of wheat, oats, and barley developed by the Texas station, in cooperation with the Department, are especially adapted to the soil and climatic conditions that prevail from central Texas to the southern tip of the State. Austin wheat, first released in 1942, Ranger and Rustler oats, released in 1941, Verde oats, first released in the fall of 1942, and Tunis barley, distributed first in the fall of 1943, contributed food and feed to help win the war.

Vicland, a new disease-resistant variety of oats, released by the Wisconsin station, was grown on about 50 percent of the State's 1943 oat acreage. Wisconsin farmers produced 5,000,000 bushels of Vicland in 1942. Vicland averaged 78 bushels per acre in 1942, as compared with 53 bushels for other oats on farms throughout Wisconsin. Ohio-gold No. 1, a new yellow hybrid sweet corn developed by the Ohio station, was offered to the growers for trial in the 1944 season. This new variety in a 3-year comparison with Golden Cross Bantam outyielded the latter by 18 percent, ripened 6 days later, and was rated sweeter in flavor.

New varieties of oats have made the oats crop much more dependable. In the North Central States, when rust is not bad, the new varieties increase the yields by an estimated 10 or 15 percent. In bad rust years they increase the yields by as much as 100 percent over what would be harvested from the old varieties. Many improved barley varieties have been introduced, and also new stiff-stalked, disease-resistant grain sorghums adapted to combine harvesting.

Constantly the plant scientists endeavor to develop better cottons, in response to a demand for varieties capable of meeting the competition of other fibers both natural and synthetic. They depend heavily for the application of their results on progress in building up one-variety communities.

One-variety programs have been launched in more than 2,500 cotton-growing communities, whose total area in cotton exceeds 9 million acres. Varieties that produce stronger fibers have been produced for the Mississippi Valley and for the southeastern states. Many one-variety communities use them in standardized production. In New Mexico and west Texas the new variety of cotton called Acala 1517 is in general production. This variety is stronger than any other of its length. One-variety communities in Georgia have started the production of a new variety of cotton called Empire, and other new varieties are making headway in other areas.

In the war years the Department's drug plant gardens provided information and propagation materials that served to start the production of drug crops in the United States and elsewhere. Among them were belladonna, digitalis, and pyrethrum. Promising results attended the breeding of devil's shoestring, the only native plant found to yield any substantial amount of insecticide. Widely distributed throughout the eastern and Gulf Coast states, it produces individual plants that contain as much as 2 percent rotenone. Breeding and selection have produced a population of the plants which consistently yields about 2½ percent rotenone in the roots. This insecticide, nonpoisonous to man, has heretofore been imported from tropical countries. In specimen gardens at Beltsville, Md., the Department has assembled propagating material for numerous drug, condiment, and oil-yielding plants, and has made observations of their behavior and growth habits.

In California's Imperial Valley a new cantaloup called No. 5 and released in 1942 by the Department and the California Experiment Station has virtually supplanted No. 45, the variety previously in general use. Though No. 45 was resistant to one form of mildew, it succumbed after a few years to another form. The new variety No. 5 is resistant to both forms. Growers produced a seed crop of it immediately—enough to plant several thousand acres in the spring of 1943.

The vitamin-high tomato, our third most important vegetable crop, has been improved greatly in its power to resist disease. One new variety, Pan America, is highly resistant both to fusarium wilt and to nailhead spot. In greenhouse tests in 1943 it proved nearly 100 percent resistant to fusarium wilt.

The Missouri station found that seedless tomato fruits of better size and quality than those from normal pollination can be produced if the pistil of a tomato flower is treated with a salve made by mixing with lanolin the residue from a crude alcoholic extract of corn kernels taken 10 to 15 days after the silks first emerge from the ear. The activity of this extract surpassed that of any synthetic chemical known to induce seedless fruit. The Early Chatham, a new extra-early variety of tomato, has been released by the Michigan station. It matures at least 1 week earlier than other common varieties of that area, and this earliness makes it particularly adapted to the Upper Peninsula and other areas of that latitude. It originated from a three-way cross, Break O'Day X Redskin X 216 (an unnamed selection).

The Wando pea, announced in 1943, proved highly resistant to cold, and consequently valuable for market crops in areas liable to untimely freezes. In the vegetable breeding laboratory at Charleston, S. C., it resisted a cold snap that cut other varieties to the ground. Wando lost only its blossoms, which it soon replaced. The Pioneer Bean, the first variety

of snap bean that proved resistant to curly top disease, far outyielded other varieties in irrigated areas of Washington, Oregon, and Idaho, where the curly top disease is prevalent. Farmers praised its quality, flavor, and appearance.

Two new varieties of cigarette tobacco, No. 400 and No. 401, have recently been introduced in the flue-cured areas. They make good yields with a high percentage of the leaf grades now in keen demand. The variety No. 400 produces large yields of cigarette leaf on the soils of the Piedmont and is resistant to black root rot. The variety No. 401 does well on the Coastal Plain and has two striking advantages. It has an exceptionally big leaf and can be grown without loss of quality under the more intensive methods such as those that include soybeans or peanuts in the crop rotation.

Tobaccos resistant to blue mold have been developed through the use of resistant wild varieties. Some crosses with wild species have produced plants that are highly resistant to wild-fire and other destructive tobacco diseases. The crossing of cultivated with wild tobacco is a slow process because few of the crosses produce seed. But those that do may have the chromosomes of both parents with the result that they continue the desirable qualities of the cultivated varieties along with the disease-resistance of the wild varieties.

Most important of the hard fibers is abaca (Manila hemp). Abaca furnished the raw materials for all high-grade rope, especially marine rope. Produced formerly only in the Orient, the war cut off our supply. Fortunately the Department had made some preparation for this emergency. In 1925 it had brought a shipment of about 1,000 carefully selected abaca plants from the Philippine Islands to the Republic of Panama. Experimental plantings showed that the climate and the soil of Panama were favorable for this plant, and that in its new home it would produce fiber of excellent quality. These plantings, expanded first to 50 acres and afterwards to 2,000, provided an abundant supply of propagating material. A large acreage of abaca is now being produced both in Panama and in Costa Rica. Abaca will be produced in these two countries in steadily increasing quantities, and in other countries of Central America.

ARTHUR P. CHEW.

NEWSPAPERS. The war's end, coming with unexpected suddenness, made little change in the newspapers' preoccupation with their main problem, the supply of newsprint. The limited tonnage available through the war period, controlled in the United States by the War Production Board on a prescribed individual quota basis, had been a strait-jacket on news, circulation, and advertising; though this limitation seemed an easy one by comparison with newsprint available in foreign lands. Government control of newsprint, except for inventories, ceased at the year end. No prospect of increased tonnage seemed likely for six months at least. Some publishers asked continued control, fearing that small newspapers might find themselves squeezed from buying in a competitive market. A voluntary limitation on use was established, however, and newspapers generally signed a pledge to put 3 per cent of their tonnage in a pool, if necessary, to prevent any suspensions of publication.

On the news side the editors turned from the reporting of war to covering a world in the difficult tasks of political and economic reconversion. Concentration on a dominant story of hostilities gave way to an effort to give the news of the much more complicated events, domestic and foreign, which

followed immediately on the German and Japanese surrender.

Censorship stopped promptly in the United States. In the occupied enemy countries the newspapers, formerly under the thumb of dictators, were licensed and controlled by the military occupation authorities. By a swift turn of the wheel, they were compelled to print news favorable to democratic principles, and reveal the truth about the cruelties and grave misdeeds of their former rulers.

On the whole newspapers enjoyed a prosperous if troubled year. Newsprint quotas were increased slightly but the price was raised \$3 a ton, and a further increase of \$6 was announced in December, the two advances meaning an additional expense in excess of \$30,000,000 a year to United States newspapers. Canada, the main source of supply, was expected gradually to increase its exports as manpower returned to the mills; but the alarming prospect was for a rapid decrease in United States production since paper makers turned to more profitable and higher priced book and magazine stock. No hope was seen of a supply from the Scandinavian countries, which sent such tonnage as they were able to make to Russia and the liberated countries. The newspapers in these lands had to be content with little more than a trickle. The British newspapers, which during the war had been held to 17 per cent of peacetime use, expanded their consumption only to 28 per cent so as not to put a strain upon Britain's foreign financial obligations. Efforts were being made to establish a second newsprint mill in the Southeastern United States to add to available tonnage, for newspapers foresaw a great need of paper to meet the demands of readers and advertisers and to reap the benefits of expected business activity and prosperity.

Ending of the voluntary wartime news censorship in the United States—which had worked admirably—coincided with a wide-spread interest in a free press, or at least free access to news by American correspondents in other lands. There had been difficulty with Army and Navy censorship in many theatres, but scarcely more than was to be looked for in so far-flung a war. The most sensational incident was the premature sending of the news of the Germans' signing of the surrender by a correspondent of the Associated Press. The dispatch was forwarded by telephone to London before the Army approved release, and before the other correspondents who witnessed the surrender had been permitted to file their stories. SHAEF authorities disciplined the correspondent, and the Associated Press publicly stated its regrets at the violation of an understanding concerning the anticipation of this important news.

Strong support was given to various proposals in favor of a free press throughout the world, and freedom of communications. A well-intended if mistaken effort was made in Congress to limit UNRRA aid to countries which permitted correspondents to report news without interference, but this was finally eliminated. At the third Pan American radio conference in Rio de Janeiro the United States, through the Assistant Secretary of State, urged access to news sources in all nations. The House and Senate had unanimously adopted a resolution expressing "belief in the world wide right of interchange of news by news gathering and distributing agencies, whether individual or associate, by any means, without discrimination as to sources, distribution, rates or charges; and this right should be protected by international compact." American delegates to the UNO meeting

were instructed by the State Department to push for a prompt international study aimed at promoting freedom of the press in all countries.

More than resolutions would be required, it was evident, to gain a measurable approach to such freedom. Even Gen. MacArthur arbitrarily sought to limit the number of correspondents permitted to report the news from Japan and Korea. After vigorous protest the quota system was revoked. The Chungking Government of China listed a number of well-known correspondents as not acceptable. The fascist-minded forces in the Argentine used violence and intimidation to prevent unbiased news correspondents from telling the world the truth. Russia allowed foreign news writers to visit its occupation zone in Germany only months after the surrender; and correspondents in Moscow were hampered in their work. Writers were harassed or expelled in Egypt, Palestine and elsewhere. True freedom of the news seemed some distance away.

Newspapers had reported the war with extraordinary enterprise. Correspondents displayed the greatest bravery in accompanying the armies and navies in the fighting; and because of aerial bombing there were no safe assignments. Allied headquarters in Europe announced that between 4 and 5 percent of correspondents had been casualties in the 11 months' campaign leading to the German surrender, compared with 19 percent for the combat ground forces. There had been 1,388 correspondents accredited to SHAEF and about 1,000 had actually served. Of these 14 had been killed, 27 wounded, and 3 were missing. A number had been captured and held in Nazi prison camps, and Joe Morton, of AP, was executed by the Germans. In the Pacific the casualties were not so numerous, though higher than in any previous war.

All newspapers made plans to cover the news of the postwar world on a scale never before known. One of the results of the first world war had been to increase readers' interest in and knowledge of foreign affairs, and the papers had responded to this demand. It was apparent that the United States would have great responsibilities in world affairs and the newspapers would be looked to for information of current events in this field. Bureaus were promptly opened, or reopened, in foreign capitals by leading metropolitan journals. Many war correspondents quickly turned to the reporting of political developments. Steps were taken to improve communications, to seek lower tolls which would enable a wider flow of news between nations, and to free the gathering and forwarding of news from control of any censorship.

Of outstanding interest was the decision of the United States Supreme Court, by a vote of 5 to 3, upholding the anti-trust action brought by the government against the Associated Press' cooperative news-gathering agency. The AP, the court held, was under legal compulsion to serve competitors of present members whose applications otherwise were acceptable. It was required to alter its bylaws. After a petition for rehearing had been denied, the AP elected to membership several important newspapers, notably the *Chicago Sun*, which had sought membership for some time, and revised its bylaws governing election of new members.

Justice Black, in the majority opinion, stated that the Government had charged that the AP was "(1) a combination and conspiracy in restraint of trade and commerce in news among the states and (2) an attempt to monopolize a part of that trade." The bylaws, he said, prohibited all AP members

from selling news to non-members, and granted each member powers to block competitors from membership. The lower court had enjoined the AP against observing any bylaws which would give members in the same city and field (i.e. morning or evening) powers to impose any conditions upon the admission of an applicant. The Supreme Court upheld this decree. It dismissed the contention that publishers engaged in practices made unlawful by the Sherman Act were entitled to a partial immunity by reason of any "clear and present danger" doctrine which the courts had used to protect the freedoms of speech, press and religion.

The dissents of Justice Roberts and Chief Justice Stone were vigorous. They said the decision converted the AP into a "public utility," subject to the duty to serve all on equal terms. They declared that the lower court "has been unable to find support for a conclusion that the AP either intended, or attempted to, or in fact did, unreasonably restrain trade or monopolize all or any part of any branch or trade." Justice Murphy feared that the decision would lead to "unjust and more drastic" measures on the part of government to control the press. The court remarked that when Congress had intended to exempt any cooperative undertaking from the anti-trust law it had done so explicitly, and some publishers advocated asking Congress to pass legislation in favor of the AP.

What the eventual results of the decision would be upon the membership—whether it would lead to a rush of applicants when newsprint supplies became available—was not immediately clear. The AP continued to make plans for expansion of its world news service and the directors placed a fund of \$1,000,000 a year at the disposal of the general manager to develop the service. Expenditures for gathering foreign news had increased to \$2,000,000 a year, compared with \$2,799,000 for domestic news.

The number of newspapers in the United States showed comparatively little change in the year.

Circulation rate increases for carrier delivered, mail subscription, and single copy sales were numerous, and no reduction in circulation resulted. The general trend toward obtaining a larger portion of a newspaper's total income from circulation was continued. This was regarded as a healthy development, for it had long been recognized that some rates, particularly those for mail subscriptions on RFD routes, had been unjustifiably low. The Bureau of Advertising of the American Newspaper Publishers' Association issued a statistical estimate that the people of the United States spent in a year \$727,880,000 for newspapers, \$311,773,000 for magazines, and \$306,379,000 for books. An interesting survey of the important weekly newspaper field made by the American Press Association showed that 68 per cent had more than 1,000 circulation. A total of 756 had more than 3,000 circulation, 1,533 had between 2,000 and 3,000; and in the lower brackets 3,294 had 1,000 and 2,000 circulation, and 2,594 had less than 1,000.

The annual compilation of *Editor & Publisher* listed at the year-end 330 morning newspapers in the English daily field (a decrease of 8); 1,419 evening newspapers, a decrease of 2; and 484 Sunday newspapers, an increase of 3. Total circulation of morning newspapers was 19,239,913 and of evening 29,144,275. The combined total reached the unprecedented figure of 48,384,188 copies. The circulation of Sunday editions totalled 39,860,036. Statistics issued by the American Newspaper Publishers Association, on the other hand, showed that

ten new dailies had begun publication and only 8 had suspended. Weekly or semi-weekly newspapers, according to the directory of the American Press Association, numbered 8,504 a decrease of 223. Total circulation of this group was set at 14,321,000 an increase of 165,000 in the year.

Discussion of the long term trend toward fewer newspapers continued. Prof. Raymond B. Nixon in the *Journalism Quarterly* presented an interesting table covering the years 1929-1944, as follows:

SUSPENSIONS OF ENGLISH-LANGUAGE DAILY NEWSPAPERS OF GENERAL CIRCULATION IN THE UNITED STATES, 1930-1944

Year	Out- right Sus- pen- sion	Merged and Dropped	Daily to Weekly, etc.	Total Sus- pen- sions	Total Dailies Dec. 31	Circu- lation Sept. 30
1929					1,944	39,425,615
1930	22	14	2	38	1,942	39,589,172
1931	26	19	7	52	1,923	38,761,187
1932	22	20	6	48	1,913	36,407,297
1933	23	15	7	45	1,911	35,175,238
1934	18	5	8	31	1,929	36,709,010
1935	11	6	4	21	1,950	38,155,540
1936	15	6	4	25	1,989	40,292,266
1937	22	17	12	51	1,993	41,418,730
1938	24	16	12	52	1,936	39,571,839
1939	30	7	24	61	1,888	39,670,682
1940	15	8	11	34	1,878	41,131,611
1941	15	10	8	33	1,857	42,080,391
1942	20	10	18	48	1,787	43,374,850
1943	8	10	9	27	1,754	44,392,829
1944	5	2	3	10	1,744	45,954,838
	276	163	135	576		
Net Loss in Number of Dailies in 15-Year Period						200
Gain in Total Circulation						6,529,223

Discussion in this field emphasized the tendency toward elimination of newspaper competition. Prof. Nixon asserted that there were 174 cities in which "full or partial combination of all local dailies potentially eliminates competition." It is worthy of note, however, that in many places where newspapers under different ownership had joint business management, the news and editorial departments remained strongly independent and competitive.

Advertising volume, restricted by the limitations of newsprint supply, was approximately 1 per cent greater than in 1944, but the gain in the later months was increasing. The total volume was still some 25 per cent less than in the peak year 1929, but it was generally agreed that a tremendous volume of advertising would be offered as soon as civilian production of consumers' goods was large enough to create competition. Increases in advertising rates, to meet increased expenses, had been general. An interesting development was an organization of an association of substantial newspapers to sell black-and-white advertising in daily editions in a group "package." Many minor attempts to organize such a group had been made before, but had been successful only in the Sunday rotogravure, comic or magazine supplements. Progressive publishers believed that this group selling of space would be an important factor in the future. L. H. D. Weld, a recognized statistical authority, stated that in 1944 newspapers had carried 45.2 percent of the total dollar volume of advertising in the United States. Of the \$1,426,000,000 total, the newspapers had carried \$645,000,000, radio \$400,000,000, magazines \$285,000,000, outdoor (billboards, etc.) \$70,000,000 and farm journals \$26,000,000. A court decision in New York upheld the right of newspapers to refuse any advertising which they thought undesirable for any reason, and to edit copy in advertisements.

This right had always been asserted by newspapers in their rate cards, but an advertiser who had wished to state that his establishment declined the patronage of certain religious and racial groups took the matter to court.

The labor situation in the newspaper field deteriorated as in other industries. The postwar economic strains were felt in all labor negotiations and strikes were more frequent than in many years past. Prolonged strikes took place in New York, St. Louis, Seattle, Birmingham, Newark, and many other cities. Many labor unions rejected summarily the principle of arbitration which before had been an accepted method of settling disputes in the newspaper world. Removal of the so-called "Little Steel" formula, which had held wage increases to 15 per cent over the January 1941 scales, threw the adjustment of pay wide open. Under threats of strikes the scales, already the highest in any industry, were advanced more substantially than in any previous year, and important changes in working conditions were added as well. Weekly pay increases of from \$6 to \$12 for a work week of 35 to 40 hours were general. Publishers objected strongly to the new international laws of the typographical union, which, in their opinion, would give the officers of the union power to set aside a contract already agreed upon. In all 70 newspapers in 37 cities were affected by strikes in the year. Of these 32 had been initiated by the typographical union.

A report of the ANPA labor committee listed 151 contracts with the American Newspaper Guild covering 165 newspapers, an increase of 10 contracts and 7 newspapers in the year. Of the contracts 72 covered news and commercial departments, 64 news and editorial only, and 15 commercial only. These contracts were effective in 95 cities. The Guild announced that its membership was now in excess of 22,000.

With the great increase in the cost of newsprint and the advances in wages, it was evident that newspaper publishing was to be considerably more expensive in the future, and that management would be taxed to find operating economies which would go any appreciable way toward meeting the higher costs.

Newspapers abroad faced difficult problems in the war-impoverished Allied countries where resources and supplies were limited; in the liberated and conquered nations there were questions of licensing and control by the occupying authorities. The first German newspaper to obtain the right to publish was the weekly *Nachrichten*, in Aachen, licensed in June. The task of the American authorities was to develop an anti-Nazi staff which could be trusted. Licenses were issued cautiously, and in October there were 14 newspapers in operation, with a circulation of 1,750,000 copies. A convention of the editors was held, the first meeting of a free press in Germany in 12 years. They asked for full and accurate news of the world as the best antidote to Nazism.

In France the government went a long way toward ending all censorship of the press. An interesting incident was the public rebuke of the French press by President Truman for the bias of its news concerning the United States. A warm debate on the degree of freedom enjoyed by newspapers in Russia was begun by Kent Cooper, General Manager of the Associated Press, when he remarked that after the war, nine-tenths of the countries of the world, excepting the Soviet Union and China, would uphold the principles of freedom of the press. The Russian publication, *War and the*

Working Class, replied vigorously asserting that the press in that country was free in that it represented the masses of the people. In other countries, the Soviet magazine asserted, the press was under business control, and although nominally free by law, the broad masses had no opportunity to finance and publish their press. The article further declared that Russia in 1913 had had 859 newspapers with a circulation of 2,700,000 and in 1939 had 9,000 with a circulation of 38,000,000.

In Japan Gen. MacArthur had great difficulty in getting an approved Japanese press in operation. The great Japanese newspapers before the war had been among the most prosperous and enterprising in the world, but had largely been spokesmen for government opinion in their news and editorial columns—or at least had done little as spokesmen for the people. The Domei News Agency even after the occupation distributed propaganda stories of American "brutalities." Gradually, however, under a censorship, the newspapers were put in some semblance of a democratic press. Premier Shidehara promised freedom and said that his government would welcome objective and impartial news and unreserved expression of the popular will.

The British journals, limited to the use of 28 percent of pre-war tonnage of newsprint, encountered troubles in rehiring of staffs, hardly needed for such small issues. Great hopes of expansion when world trade was resumed were expressed, but little progress had been made by the year's end.

In South America, particularly in the Argentine, there were recurring instances of censorship and intimidation of independent editors by government. The Peron regime in Buenos Aires was especially anti-democratic in its treatment of the press and foreign correspondents.

Proposals for severe increases in second class postal rates—eventually to reach some 600 per cent over present rates—were advanced by a cost accountant employed by the United States Post Office Department to study the subject. The proposals did not reach the stage of legislation, but publishers the country over were aroused over the prospect of a struggle to prevent increases which would stifle mail subscriptions. They were prepared to challenge the basis of the allocations of post office costs in the study, particularly those of RFD costs, and to present a good argument on the services of the newspapers in disseminating news to the citizens. A gratifying development was the decision of the courts in the *Esquire* case, holding that the Postmaster General did not have the right to deny second class postal privileges to a publication because it did not conform to his standards and taste in matters alleged to be obscene.

Newspapers showed increasing interest in ownership of radio stations, especially the new FM stations soon to be in operation. The area of broadcasting of these stations would correspond roughly to the local and suburban coverage of newspapers. Some 40 per cent of the 665 applications filed for these stations were from newspapers.

Expansion plans of newspapers in plants and equipment had been halted by the war. The surrender of the Axis nations let loose floods of orders for presses and other equipment, and many newspapers announced extensive enlargements of their buildings. Great technical improvements were expected in the printing of newspapers, and a wider use of color in the daily editions.

The American Newspaper Publishers Association appointed a special committee on Press Communi-

cations. The members were concerned over proposals to establish greater government control over international communications, to change or limit the radio frequencies reserved for the exclusive use of the press, thereby forcing the newspapers to employ the inadequate and more costly cable service. It seemed likely that a considerable degree of monopoly in international telecommunications might be in the offing and this appeared to be a danger to broader publication of world news. However, the United States and Britain at a conference in Bermuda in December agreed to establish lower rates and to provide speedier transmission for news dispatches.

The fine record of the news services in reporting the war was marred by a premature announcement by the Associated Press of the German surrender, on the basis of a statement by Senator Connally at the San Francisco Conference; and a false "flash" dispatch sent over the wires of the United Press announcing Japan's acceptance of the surrender terms. The flash originated with some mischief maker in a newspaper office, and was announced on the radio. It was killed before it was published in any newspaper. A reward of \$5,000 was offered for the detection of the sender.

Foreign language newspapers in the United States continued during the war, apparently with complete loyalty to democratic principles. There was no "witch hunt" by the government, and even the German language newspapers suffered no loss. The foreign language newspapers numbered 1,076. The continued existence of these newspapers, which had been expected to disappear as immigration into the United States lessened, was surprising to many in the journalistic world.

A number of men and women prominent in newspaper making died in the year, among them Ernie Pyle, famous war correspondent, killed on Okinawa; Carr V. Van Anda, former managing editor of the *New York Times* and generally acknowledged as the foremost news executive in the history of journalism; O. K. Bovard, formerly managing editor of the *St. Louis Post Dispatch*; Victor Hanson, publisher of the Birmingham, Ala., *News and Age Herald*; J. V. Connolly of the King Features Syndicate; M. Koenigsberg, former head of the International News Service; Alexander Dana Noyes, financial editor of the *New York Times*; and Marie Gasch, who wrote a column of personal advice under the name of Beatrice Fairfax.

CHARLES MCD. PUCKETTIE.

NEW ZEALAND. A British Dominion in the South Pacific Ocean, consisting chiefly of two large islands about 1,200 miles east of the southeastern coast of Australia. The Dominion has jurisdiction over Western Samoa (League of Nations mandate), Tokelau or Union Islands, some islands of Oceania and the Ross Dependency. Area, 103,723 square miles. Capital, Wellington.

Government. Executive power is vested in a Governor General, appointed by the Crown for 5 years on recommendation of the Dominion Government. Legislative power rests with a Parliament of two chambers—the Legislative Council with an indeterminate number of members (36 in 1943) appointed by the Governor General for 7 years, and the House of Representatives of 80 members (including four Maoris) elected by general male and female suffrage for three years. The Governor General delegates his executive powers to a Cabinet responsible to the House of Representatives. Governor-General in 1945, Sir Cyril L. N. Newall, sworn in Feb. 22, 1941.

The standing of the parties in the House of Representatives following the general election of Sept. 25, 1943, was as follows: Labor, 45; National, 34; Independent, 1. The Labor Party has been in control of the Government since Dec. 5, 1935. Prime Minister, Peter Fraser, appointed April 30, 1940.

Events, 1945. Soon after the surrender of Germany a relaxation of wartime controls began. At the end of June the Minister of Industrial Man-Power announced that wives of returned service men and married women over 40, widows of servicemen and persons under 18 could now choose their own employment. Early in July nearly 200 businesses were removed from the essential list. Demobilization began on Aug. 18, immediately after the end of the war with Japan, with especial attention to the needs of the farm year just beginning. On Aug. 21 the War Cabinet was dissolved and the two non-Labor members resigned. Postwar defense plans were still incomplete at the end of the year, pending an understanding with Australia on regional defense needs and a knowledge of the demands to be made by the United Nations Security Council.

Participation at San Francisco. Prime Minister Peter Fraser attended the meeting of Commonwealth representatives in London in April to discuss the Dumbarton Oaks proposals and other questions connected with participation in the San Francisco Conference by members of the British Commonwealth. At San Francisco Fraser took an active part in the conference on behalf of his country and as an exponent of the rights of small nations in general. New Zealand insisted as long as possible that the proposed Assembly should have veto action over the Security Council. Fraser supported the Soviet Union in asking delay in seating Argentina. Throughout the deliberations New Zealand insisted on expanded functions for the proposed Economic and Social Council.

The Prime Minister returned to Wellington from San Francisco on July 6, well satisfied with the changes made at San Francisco. After a three-day debate the New Zealand House of Representatives ratified the United Nations Charter and the Statute of the International Court of Justice on August 7.

Parliament in Session. The session of the New Zealand Parliament which was opened on June 27 by Governor General Sir Cyril Newall was important and eventful, with new political strains evident and socialization programs under consideration. For the first time in its almost 10 years of power the Labor Party faced an organized group of opponents. The new united front included the National Farmers' Federation, the National Employers' Federation, the New Zealand Manufacturers' Federation and the Associated Chambers of Commerce. The purposes of the alliance, as defined in a preliminary statement, were to fight the trends towards what was defined as national socialization. New Zealand business men had for some time been trying to decide on the most effective grounds of opposition to the Labor Party, and the farmers were a perennially dissatisfied group. In 1945 the antagonism of the latter was brought to a head by the Government's announcement of a move against the "country quota," a curious survival from the last century when rural interests forced a law providing that rural communities should have their voting strength raised by adding 28 per cent to their population when electoral districts were being redefined after each census.

The bill to nationalize the Bank of New Zea-

land by having the Government purchase the shares was introduced in the House of Representatives on Oct. 31. Private shareholders could take cash or Government securities in return, and their income from the latter would be the same as before the exchange. Directors would continue in office but would be required to have regard to the representations of the Minister of Finance and to Government decisions conveyed by him. The rights and privileges of the staff would be preserved.

This proposal was not a new one; it had, in fact, been outlined by Minister of Finance Walter Nash on the preceding March 31; but the discussion was animated. The New Zealand Chambers of Commerce issued a warning against the measure on Nov. 10, saying that the Bank's fate, and the fate of other banks with it, was sealed, and that the prophets of "funny money" had emerged triumphant. A two-day debate in the House of Representatives was marked by opposition members howling down Nash when he spoke beyond his time, so that the rest of his speech appeared as a handout to the press. The bill was passed on Nov. 22.

At the same time a bill for the nationalization of New Zealand airways was introduced. It provided for the formation of the New Zealand National Airways Corporation, which would in reality be a department of the Government. The initial capital of £1,000,000 would be furnished by the Government and the corporation would have the power to borrow £500,000 more from the same source. The terms on which existing air services were to be acquired were not specified in the bill, but the corporation was given power of compulsory acquisition on terms decided by negotiation or arbitration.

The National Labor Party Conference in its November session moved even further along the road to socialization. The Conference recommended that the Government create collective and cooperative farms and also demanded that all farm lands not in full production be taken for war veterans.

When the long session ended on Dec. 7 the record showed the battle over nationalizing the Bank was exceeded in liveliness only by that of the "country quota." The National Party and the Farmers' Union utilized every possible expedient to halt the bill, but they were defeated. Labor replied that it was essentially democratic to insure equality in voting.

The Trade Problem. In the closing months of the year New Zealand was intensely occupied with maintaining the export position so vital to its economy. When it was first rumored that the United States would make a loan to Britain conditional on the abandonment of empire preference, New Zealand was one of the Dominions which protested promptly. Finance Minister Nash told the press on Oct. 10 that trading and other relations with Great Britain were so good that New Zealand would not disturb them except to improve the volume of commerce all round.

The Government's licensing system for 1946, made public on Nov. 4, virtually eliminated United States goods from the New Zealand market and gave heavy allocations to Britain. Many items which the United States was accustomed to export were classified under "United Kingdom and Australia 100 per cent of 1945. Canada and United States deferred." The Minister of Customs stated that the policy of obtaining New Zealand's requirements from the United Kingdom to the maximum possible extent would be continued. He indicated that there was uncertainty and possibly

some difficulty in buying from non-sterling areas.

New Zealand's commodity trade position was favorable in 1944-45, and the official action taken late in 1945 indicated an intention to keep it so. Exports jumped from £74,000,000 in the preceding year to £85,000,000, while imports increased only from £28,000,000 to £31,000,000. In view of the country's trading relationships, this meant that New Zealand's holdings of sterling exchange were now large. Details of a four-year contract for Britain to buy New Zealand's exportable surplus of meat were announced early in November.

Other Events. Sir Bernard Freyburg, Commander of the New Zealand Army Corps, was named in September to succeed Sir Cyril Newall as Governor General at the expiration of the latter's term of office in February, 1946. Sir Patrick Duff took up his duties as British High Commissioner in New Zealand in the middle of the year, succeeding Harry Batterbee. Kenneth S. Patton, United States Minister in New Zealand, left Wellington in October to accept another assignment. Avra Warren, who has held several important diplomatic posts in Latin America, was appointed to succeed him.

The Population. The population of New Zealand was estimated at 1,643,909 in March, 1944. Western Samoa, with an area of 1,133 square miles, has a population of about 62,000. Vital statistics for the white population of New Zealand in 1943 show a birth rate of 19.7 per thousand, a low death rate of 10.0 per thousand, and the strikingly small infant mortality rate of 31.4 per thousand. The number of those in the armed services killed in the war up to May 31, 1945, was 9,844.

The people of New Zealand are largely of British origin, but another element in the population is made up by approximately 90,000 Maoris, Polynesians who migrated from the eastern Pacific several centuries ago. Their number, which at first decreased during white occupation, is again increasing.

Primary education in New Zealand is free and compulsory. The number of schools at all levels is large and the four colleges of the University of New Zealand had an attendance of 5,528 students in 1940. The census of 1936 showed religious affiliation as follows: Church of England, 40 per cent; Presbyterian, 23 per cent; Roman Catholic, 13 per cent, and the remainder scattered. New Zealand has an extensive social security system which began in 1898 with old age pensions and is therefore the oldest in the British Commonwealth.

The Economy. In spite of the rapid expansion of manufacturing in the country, New Zealand's economic system continues to rest upon the production of agricultural and animal products for export. Butter, cheese, meat, mutton and lamb, wool and skins bulk large among these commodities. The predominant position of Great Britain as a source of imports and a market for exports antedates by many years the wartime direction of trade in those channels.

ALZADA COMSTOCK.

NICARAGUA. A Central American republic. Area: 57,143 square miles. Population: 1,030,700 (1942). Capital: Managua.

Nicaragua's eastern and western lowland regions are separated by a highland area of from 5,000 to 7,000 feet elevation sloping gradually toward the southeast. The low coastal lands of the east have a wet tropical climate, while the northwestern lowland area has dry-winter climate. Temperate

to cool weather is found in the highland regions, varying according to altitude.

Government. Under the Constitution of 1939, Nicaragua has a bi-cameral Congress: a Senate of 15 members and a Chamber of Deputies of 40. There is a Cabinet of 7 members. All former presidents who were elected directly may sit as members of the Senate. The present Congress was formed by the division into two chambers of the Constituent Assembly elected in 1938, and it is to serve until Apr. 15, 1947. Anastasio Somoza became President in 1937 for a 4-year term which was extended in 1939 for 8 years as the result of adoption of the new Constitution.

The People. Sixty-eight per cent of the total population of Nicaragua are mestizos; 17 per cent are of European descent; 10 per cent are Negroes, and 5 per cent Indians. Highest regional density of population is in the western lowlands. The chief cities are: Managua, 87,620; León, 31,799; and Granada, 25,530 (1941 est.). The largest foreign colony is Chinese.

Spanish is the official language of the country. Roman Catholicism is the predominant religion.

About 30 per cent of the total population are estimated to be literate. In 1941 there were 648 primary schools with a total enrollment of 61,000. In 1938 there were 28 intermediate schools with a total registration of 1,181; and 413 students were enrolled in schools of higher education. There are 3 universities. Fifty-eight rural schools were opened in 1944 to provide instruction for over 3,000 children.

National Economy. Nicaragua's economy is agricultural. Coffee is the most important crop, with sesame seed ranking second. Sugar, rice, cotton, corn, beans, and bananas are also important crops. Livestock-raising is one of the principal occupations; there are an estimated 800,000 head of cattle in the country. Nicaragua also produces important forest products.

Gold and silver are practically the only minerals mined in Nicaragua. In 1944, gold production amounted to 219,579.1 troy ounces; silver, to 254,457.2 troy ounces.

There is little manufacturing. Small establishments make such articles as cigarettes, matches, beer, cement, leather shoes, furniture, and cotton textiles.

Foreign Trade. The value of Nicaragua's foreign trade in 1944 was estimated at \$25,000,000, of which imports constituted \$10,000,000 and exports \$15,000,000. In that year gold exports were \$7,700,000; coffee, \$3,700,000; rubber, \$1,000,000; lumber, \$675,000; sesame seed, \$466,000; and sugar, \$325,000. The United States was the principal market, receiving about 90 per cent of total exports. Panama ranked second as an export market, Costa Rica third, Mexico fourth, and Peru fifth.

Leading imports in 1944 were estimated at: textiles, \$2,000,000; machinery and vehicles, \$1,800,000; chemicals, \$1,500,000; foodstuffs, \$1,200,000; petroleum, \$1,100,000; iron and steel products, \$800,000; and paper products, \$350,000. The United States was the chief source of Nicaraguan imports, supplying 76 per cent of the total. Mexico ranked second, followed by Panama, Costa Rica, and Peru, in that order.

Events. There was an unusual amount of political activity in Nicaragua during 1945. It was the year before a presidential election, and recent upsets in other Central American countries seemed to have influenced President Anastasio Somoza.

At the beginning of the year Somoza told a correspondent that he would "throw away fifty

million presidencies for peace in Nicaragua." And during the summer he said that all persons who believed they were qualified would be allowed to run for president in 1946.

But late in July *La Noticia* of Managua reported Somoza had announced that he himself would again be a candidate since he "was not able to oppose the wish of the people." He said that he had hoped to postpone political activity until the following year, but "before the desire of the citizens that he launch his candidacy he had no course but to obey."

The editor of *La Noticia* was of the same political faith as Somoza, but he published an editorial denying the President's assertions, regretting that political serenity would now be destroyed, and noting that the fight was starting for the "alternation in power which was the legitimate aspiration of a majority of the Nicaraguan people."

Later, the President declared he would withdraw his candidacy "when all political tendencies unite on one man who has prestige with the people and is capable of carrying out the work of progress realized by my administration."

On Aug. 6 the Senate repealed a decree, issued in 1934, which prohibited electoral campaigns until ten months before the date of election.

There were many rumors of unrest in Nicaragua during the second half of the year. In September the authorities denied an unconfirmed report that four labor leaders had been shot to death while being escorted to the Honduran frontier for exile. It was asserted that the men were not labor leaders but "avowed bolsheviks at the service of a European government."

An official communique issued on October 22 denied reports that police had broken up a demonstration against Somoza, and added that the "greatest calm reigns throughout the entire country." But two days later 15 Nicaraguan refugees asked permission to enter Guatemala after the Salvadoran Government had refused them entry.

There were more rumors of trouble, and another official denial early in November. Then, on Nov. 22, seven political refugees, including a former Supreme Court Justice and a one-time Minister of Public Works, arrived in Panama after fleeing as a result of their participation in a demonstration against Somoza when Chilean President Juan Antonio Rios arrived at the Managua airport on Nov. 9. Leaders of the demonstration were said to include Liberal and Conservative party heads. Eye-witnesses declared that many had been injured when National Guardsmen used rifle butts and bayonets to break up the demonstration after the crowd had ignored orders to disperse. The Government admitted "political disorders," but said no one had been injured and only leaders of the movement were arrested.

On Dec. 7, more than 800 National Guardsmen held a banquet in honor of the President Somoza declared that the Guard would be loyal, "with me at its head," to the citizen chosen by the majority for President.

Somoza declared in his Christmas message that his Government was "dedicated to the moral and economic reconstruction of the country."

President Somoza told the opening session of the 46th Congress on Apr. 15 that the previous year's budget of \$11,000,000 had shown a surplus of \$1,600,000 which permitted the construction of 58 rural schools, a new university building in Leon City, a post-office building in Managua, public health buildings in several towns, and a considerable extension of roads. He added that fiscal

charges and freight rates on coffee exports had been reduced, and that Nicaragua's contribution to the United Nations' victory consisted of a continuous increase in agricultural production.

For the first time in history, organized labor celebrated May Day in Nicaragua. Thousands of workers, carrying United Nations flags, marched through the streets of Managua; the President and his entire Cabinet viewed the parade. (It was reported that Nicaragua had 125 unions with 3,899 members.)

A serious shortage of sugar was reported in February. Sugar rationing was established during the summer, and the Finance Ministry was trying to buy sugar in Peru or the Dominican Republic. The shortage was alleviated on Nov. 7, when 10,000 bags of Peruvian sugar arrived.

Several steps were taken against Axis nationals during the year. In July an executive decree authorized the issue of \$400,000 in defense bonds. The proceeds were to be used for a public works program and the bonds would be guaranteed by "frozen" Axis funds. Later in the summer the German firm Ernesto Sierke was sold at public auction, as the Government continued its program of gradually selling all Axis properties on the Proclaimed List.

On July 6 Nicaragua became the first nation to ratify the United Nations Charter.

Martial law was lifted on Aug. 16 and at the end of November the constitutional guarantees which were suspended during the year were reestablished; emergency economic measures were continued.

In his April address to Congress, Somoza declared that Nicaragua had become the second rubber producer on the American continent; and five months later, United States Ambassador Fletcher Warren said that the Rubber Development Corporation had contracted with the National Bank of Nicaragua to buy all rubber offered until June 30, 1947.

HARRY B. MURKLAND.

NICKEL. Canadian nickel production, approximately 247,000,000 lb., again constituted nearly the entire world output in 1945 (1944 Canadian production: 275,000,000 lb.). Nearly all came from the mines of International Nickel Co. of Canada, Ltd., in the Sudbury district of Ontario, with small amounts from neighboring mines. Other producing countries were Russia, which acquired mines at Petsamo, Finland, New Caledonia, whose production waned; Sweden; and Cuba, where mines were operated by the Freeport Sulphur Company. In the six years following 1939, about 1,500,000,000 lb. was delivered to the United States and its Allies by the Canadian mines.

Nickel, because of its use in alloys resistant to corrosion and high temperature, played an important part in the development of airplane superchargers, jet propulsion engines, rockets, and ordnance manufacture. Although peacetime demand is expected to drop, stainless and other alloy steel, plating, and other metallurgical uses should continue to require about 250,000,000 lb. a year.

Controls on the use of nickel and nickel alloys were removed by the United States and Canadian Governments late in August. In addition to large stocks in the hands of producers, the United States Government held, through the Reconstruction Finance Corporation, 36,620,421 lb. as of Oct. 31.

CHARLES T. POST.

NOBEL PRIZES. In the most diverse distribution of awards since the beginning of the war, Nobel

Prizes were presented to six European scientists, a United States statesman, a Chilean poet and the International Red Cross.

The 1945 Nobel Prize for physiology and medicine was given to Sir Alexander Fleming of the University of London, discoverer of penicillin, together with two of his coworkers in penicillin research, Dr. Ernst Boris Chain and Sir Howard Walter Florey, both of Oxford.

Dr. Chain, a German political refugee, left Berlin in 1933 to join Sir Frederick Gowland Hopkins, another Nobel Prize scientist, in Cambridge to do research on enzymes and the isolation of biologically active substances. In 1938 he began collaborating with Sir Howard on a systematic investigation of anti-bacterial substances produced by bacteria and molds. This research helped to produce the foundation for the discovery of penicillin.

The award was given for the discovery of penicillin and its healing effects in treating infections. The \$30,000 prize, shared equally by the recipients, was awarded by the Karolinska Institute of Stockholm, the medical college designated in the Nobel will to name the winners in physiology and medicine.

Prof. Otto Hahn of Berlin and Prof. Wolfgang Pauli of Zurich, Switzerland, and Princeton, New Jersey, received Nobel Prizes for their research in atomic fission.

Prof. Hahn, former head of the Kaiser Wilhelm Institute in Berlin and believed to be in the United States, received the 1944 prize for chemistry from the Swedish Academy of Science.

The \$30,000 award for physics achievement in 1945 went to Prof. Pauli for his development of the "Pauli exclusion principle" used in atomic studies.

Prof. Artturi Virtanen of Helsinki, Finland, was given the 1945 chemistry award for his discoveries on a method of conservation of fodder.

The Nobel Peace Prize for 1945 was presented to Cordell Hull, former U.S. Secretary of State, for his peace efforts and his work in constructing the United Nations Organization.

Senora Gabriela Mistral, Chilean poet, teacher and diplomat, received the \$30,000 literature prize for her poetry and prose. She was the first South American author to win this honor.

The 1944 Peace Prize was awarded to the International Red Cross for its war work.

NORTH AMERICA. Excluding Mexico and Central America, but including Greenland, Newfoundland, and smaller adjacent islands, the continent has an area of about 7,591,498 square miles (19,662,000 square kilometers) and a population estimated at 143,178,000 on Jan. 1, 1940. The combined area of Mexico, Central America, and the West Indian islands was about 1,073,080 square miles and the population about 40,870,000.

NORWAY. A European kingdom occupying the western and northern part of the Scandinavian peninsula. Capital, Oslo. King, Haakon VII, who was born in 1872 and was elected to the throne by the Storting (parliament) Nov. 18, 1905. Norway holds sovereignty over Svalbard (Spitsbergen and adjacent islands) in the Arctic Sea, 240 miles distant from the Norwegian coast (see **SVALBARD**); Norway also asserts sovereignty over uninhabited Jan Mayen Island in the Arctic Sea, and certain uninhabited areas in the Antarctic.

Area and Population. Covering an area of 124,556 square miles (land area, 119,148 square miles), Norway proper had 2,952,000 inhabitants on Jan.

1, 1941, by official estimate; by latest census, 2,814,194 in 1930. Only 28 per cent of the population of 1930 were classed as urban, and females exceeded males by about 71,000. The birth rate, per 1,000, was 16.3 for 1940 (15.9 for 1939); death rate, 10.7 (10.2). Populations of chief cities: Oslo, 288,606 in 1943; Bergen, 106,500 in 1938; Trondheim, 54,458 in 1930; Stavanger, 46,780 in 1930.

Government. Under the Constitution of 1814, as subsequently amended, executive power is vested in the King, acting through a Cabinet responsible to the Storting. The Storting consists of 150 members elected for four years by universal suffrage. It divides itself into two sections of 38 and 112, called the Lagting and Odelsting, respectively. In the last pre-invasion Storting, elected in October, 1936, the standing of parties was: Labor, 70; Conservatives 36; Liberals, 23; Agrarians, 18; others, 3. For the present composition of the Storting, see **EVENTS**, below.

Norway was invaded by German armed forces on April 9, 1940, and remained almost wholly occupied until May 8, 1945. For the German administration of Norway during that period and the puppet regime of Vidkun Quisling, see **YEAR BOOK** for 1944, p. 452.

Production. In normal times 29 per cent of the workers followed agriculture or forestry, 27 industry, 10 commerce, 9 transportation, 7 fishing and whaling, 5 professions and public administration. Under German rule, all economic resources and productive facilities were coordinated as far as possible with the requirements of the Nazi war machine. Production of the chief crops in 1940, with 1939 figures in parentheses, was (in metric tons): wheat, 70,700 (77,800); barley, 91,400 (103,500), rye, 5,700 (6,200); oats, 161,200 (200,800); potatoes, 1,250,000 in 1942. The fish catch for 1940 was reported at 1,070,000 metric tons (1,030,000 in 1939). The estimated livestock population in 1943, with prewar figures in parentheses, was: milch cows, 800,000 (860,000); young cattle, 400,000 (550,000); swine, 200,000 (360,000); poultry, 1,000,000 (3,250,000). The value of ore production in 1939 was 56,500,000 kroner, with pyrites and iron ore accounting for 81 per cent of the total. Estimated mineral and metallurgical production in 1940 was (in metric tons): iron ore, 1,500,000; pig iron, 175,000; tungsten, 20; nickel, 1,250; copper, 20,000; zinc, 5,000; lead, 320; aluminum, 15,000; molybdenum, 600. The merchant fleet's earnings in 1939 were estimated at about 800,000,000 kroner. Manufacturing is confined chiefly to the processing of wood, fish, minerals, and other Norwegian products.

Foreign Trade. Imports in 1944 were estimated at 721,000,000 crowns, exports at 517,000,000 crowns. Practically all trade during that year was with Germany and countries controlled by her, or with Sweden.

Events, 1945. To the Norwegians, the first four months of 1945 merely epitomized the long ordeal they had gone through in the preceding five years. Nothing of great importance happened. Except for a small strip of barren land in the far northeastern corner of the country, liberation still was only a hope and a promise. The present was desperate Quisling rule, Gestapo terror, and near-starvation.

The liberating Red Army and Norwegian forces in Finnmark were stalled by impassable terrain, winter conditions, and systematic devastations by the slowly retreating Germans. Only a few thousand square miles of Arctic wasteland were re-

taken. The rest of the country anxiously set its hopes on a seaborne invasion from the west that never materialized. Right up to the dramatic finale of the war in Europe, it looked as though the Germans would make good their threat of a prolonged last-ditch stand in "Mountain Fortress Norway."

As in Denmark, the high tension and suspense felt by both sides at the approach of Germany's final defeat led to numerous incidents between "joessings" (patriots) and Nazis. The most serious of these occurred on Feb. 8, when the head of Quisling's Norwegian Gestapo, Karl Marthinsen, was assassinated in Oslo. The enraged Nazis avenged Marthinsen's death with the execution of 34 prominent Norwegian hostages.

Liberation. With the dramatic culmination of military events in Germany, in the last days of April, tension in Norway rose to a feverish pitch. Open rebellion was impossible in the face of a German army of occupation numbering almost 450,000 and commanded by a diehard Nazi, General Franz Boehme, but harrassing operations of the patriotic underground became bolder by the day.

Following the official announcement of Hitler's death, General Boehme on May 1 proclaimed his allegiance to Doenitz and declared that the Germans would fight for Norway to the last. Indeed, when three days later the mass surrender of German forces in Holland, Denmark, and northwestern Germany was announced, there was no mention of Norway. It was not until the formal capitulation of all German forces on all fronts that Norway regained her freedom.

On May 7, the Norwegian Home Army came out into the open, seizing strategic positions and public buildings throughout the country. The Wehrmacht offered no resistance but sporadic fights with Quisling forces occurred. A few hours later, the broadcast announcement of Germany's capitulation sent festive crowds surging into the streets while church bells tolled in every town and village.

The formal instrument of surrender of all German troops in Norway was signed by General Boehme on the evening of May 8, at Lillehammer, where he had his headquarters. At the same time, the systematic roundup of Norwegian traitors and collaborationists got under way.

One of the very first to be taken by the Home Front forces was Vidkun Quisling himself; eight of his Cabinet members also were apprehended. The most hated of Quisling ministers, Jonas Lie, dared not face arrest and committed suicide, along with the Chief of Police Henrik Rogstad. This was also the way out sought by the German Reichskommissar Josef Terboven and his Gestapo Chief Wilhelm Rediess: the pair blew themselves up with one ton of dynamite in Terboven's private air raid shelter under the Crown Prince's castle at Skaugum.

Return of the Government. First to arrive in the liberated homeland were Crown Prince Olav, commander-in-chief of all Norwegian armed forces, and three Cabinet members, who were landed at Oslo from a British cruiser on the afternoon of May 13. The party was given a triumphal welcome by the Home Front authorities. Equally festive was the homecoming of Premier Johan Nygaardsvold, with the rest of the government, on May 31. Throughout its five years abroad, the Nygaardsvold Cabinet had stood out among exiled regimes not only for its exceptional stability but also because its legality and composition were never questioned by the underground forces at home.

King Haakon was the last of the top Govern-

ment leaders to return. By agreement with his Cabinet, he picked for his homecoming the same day on which, in 1940, he and his Government had been forced to leave Norway: June 7. This was also the fortieth anniversary of Norway's declaration of independence.

A huge crowd, waiting patiently in the rain, gave King Haakon a rousing welcome as he arrived in his beflagged capital at noon. In five years of war and exile, the Norwegian monarch had achieved a distinction and popularity undreamt of before 1940.

Political Changes After Liberation. Premier Nygaardsvold's Cabinet, which in its London exile had gone through no serious crisis, resigned on June 12 to open the way for larger participation in government of the former underground.

In accordance with this purpose, the King asked the revered leader of the Home Front, Chief Justice Paal Berg, to form a new Cabinet, but the latter, a Conservative, declined in view of the country's predominantly leftist sentiment. Haakon then called upon Einar Gerhardsen, youthful leader of the Labor Party. Mr. Gerhardsen on June 22 presented to the King a coalition Cabinet of all five major parties, including, for the first time, the Communists. With the exception of Foreign Minister Trygve Lie and Defense Minister Oscar Torp, the only two holdovers from the Nygaardsvold Government, all fifteen Cabinet members had been selected from the ranks of the resistance movement. The King approved the list and appointed Gerhardsen Premier.

On Oct. 8, the first parliamentary elections in nine years were held in an atmosphere of complete calm and order. As had been generally expected, the poll marked a decisive swing to the left. The Labor Party, gaining 76 seats, won an absolute majority in the 150-man Storting; it obtained 542,508 votes—an all-time record in Norway. The Communists, who had merged with the Labor Party in July, but later had split from it again, obtained 146,423 votes and 11 seats.

The Conservative Party came out second, with 211,767 votes and 25 seats; the Agrarians obtained 117,885 votes and 10 seats; the Liberals won 184,367 votes and 20 seats. A hitherto unimportant group, the Christian People's Party, gained 104,819 votes and 8 seats in the Storting.

As a result of the Labor Party's victory, Premier Gerhardsen on Nov. 1 resigned with his coalition Cabinet and immediately formed a Laborite Government, approved by the King. Mr. Lie was retained as Foreign Minister, but Mr. Torp, who also stayed in the Cabinet, was given the Ministry of Supplies. Three more ministers were continued in office: Lars Evensen, Commerce; Sven Oftedal, Social Affairs; Kaare Fostervoll, Education. Principal newcomers were: Finance Minister Erik Brofoss; Minister of Justice Oscar Gundersen; Minister of Agriculture Kristian Fjeld; Minister of Labor Nils Langhelle; and Defence Minister Jens Hauge.

Quisling's Trial and End. Meanwhile, the purge of Nazis and traitors had been gathering momentum. A total of about 21,000 persons were arrested in the months following liberation, on various charges of collaboration with the Germans; of these, 4,269 were released again.

The death penalty, abolished 70 years ago, was restored by an act of Parliament on June 29. It was applied for the first time on Aug. 17, when a Norwegian Gestapo man, Reidar Haaland, was executed.

Vidkun Quisling went on trial on Aug. 20. The indictment, presented by Special Prosecutor An-

naeus Schjoedt, charged the Norwegian Nazi leader with a variety of crimes, ranging from high treason to petty larceny. The gravest charges were that he had not only collaborated in the Nazi invasion of April, 1940, but had actually originated the idea in order to usurp power; that he was responsible for the murder of two prominent Norwegian patriots, Viggo Hansteen and Gunnar Eilifsen, by the Germans; and that he was a deserter in wartime since he did not report for duty, although he was a pensioned officer in the reserve. The prosecution, demanding the death penalty on various counts, drew heavily on captured German documents to prove its charges. Quisling in vain sought to deny or justify the actions imputed to him. On Sept. 10 the court found him guilty of all major charges and he was sentenced to death by Justice Erik Solem.

The doomed traitor filed an appeal to the Supreme Court which was rejected on Oct. 13. Although Quisling himself did not seek a pardon from the King, his wife Maria did. A few hours after this request had been rejected by the King, Quisling was executed by a firing squad on the early morning of Oct. 24.

The Road Back. Norway recovered more rapidly and evenly from its five years of Nazi occupation and Quisling rule than most other German-occupied countries. In the absence of any disturbances, or even of any signs of possible future trouble, all foreign troops had been withdrawn by the end of the year.

The last Soviet troops were evacuated from East-Finnmark on Sept. 25, exactly eleven months after they arrived as liberators of that province. The American task force of 4,700 men was withdrawn in mid-October, after German defenses had been dismantled. The British left in November, except for a small contingent handling the last few thousand German prisoners to be sent home.

Norway's food and supply situation improved steadily from month to month. The specter of mass starvation, which loomed menacingly just before liberation, was quickly dispelled by supplies speeded from America, Denmark, and Sweden. Bread, butter, meat and fats were in comparatively ample supply toward the year's end. The coal shortage remained acute as everywhere in Europe, but imports of gasoline and oil reached almost prewar level.

On the whole, the outlook for Norway was favorable and economists predicted a complete recovery within a few years.

JOACHIM JOESTEN.

OPINION RESEARCH CENTER, National. An institution established in 1941 by the Field Foundation, Inc., of New York City, in association with the University of Denver, as the first non-profit, non-commercial organization in the United States devoted to ascertaining public opinion. During 1945 the Center's research was concentrated largely upon securing attitudes in the United States toward: (1) a world organization, (2) the control of the atomic bomb, (3) the post-war treatment of Germany and Japan and other peace problems, and (4) the responsibilities of government, business, and labor in solving the economic problems of reconversion and the postwar period. Detailed reports covering public opinion in these areas were published by the Center.

A special study undertaken in 1945 reported popular attitudes on the issue of the control of prices, wages, and salaries during the war and the period of reconversion. Another special report,

based on a survey made for the American Library Association and 17 cooperating city libraries, analyzed public information about and use of various services offered by public libraries. Other special reports and reprints by NORC staff members and associates concern such subjects as the validity of opinion polls, the accuracy of public opinion on international issues, and certain ethnic aspects of white attitudes toward Negroes.

Part of the Center's activities are devoted to discovering, testing, and perfecting new techniques, methods, and devices for ascertaining the status of public opinion. In this connection the Center serves as an organization available to research workers in academic fields for the study of such problems as interviewing techniques, analysis of data, and the interpretation of survey results.

Another purpose of the Center is to analyze and review the results of surveys made by other polling organizations. This function is fulfilled in the publication by NORC of *Opinion News*. Designed for the use of business men, government officials, educators, librarians, and others who must follow closely the trends of public opinion, *Opinion News* summarizes the findings of all the leading polling and public opinion surveying organizations, both in the United States and abroad. This fortnightly covers public thinking on current political questions, the progress of world organization and peace plans, reconversion on the domestic front, rehabilitation of liberated areas, and administration of the Axis nations.

The Center has published, on the basis of the popular vote for President in 1944, a series of ten distorted maps, each covering some important political aspect of the voting and distribution of votes by states. NORC has also published a distorted map of the world, "Distribution of World Population," in which each country is drawn in proportion to its population instead of its land area.

The National Opinion Research Center has made surveys or worked in cooperation with a number of other nonprofit organizations, including six agencies and departments of the U.S. Government. The Director is Harry H. Field. Offices: 280 Madison Ave., New York City.

PACIFIC WAR COUNCIL. A Council, announced by the President on Mar. 30, 1942, which considered matters of policy relating to the joint war effort. Meetings were held at the White House. A diplomatic representative of each of the following nations attended meetings of the Council: United States, Great Britain, China, The Netherlands, Australia, Canada, New Zealand, and the Commonwealth of the Philippines.

PALAU ISLANDS. A group of islands (143° 10' E. and 6° 50' N.) in the western Carolines of the Japanese Pacific Islands: The chief islands of the group are Palau proper, or Babeldaob (143 sq. mi.), Angaur (3 sq. mi.), and Koror (3 sq. mi.). Total area, 184 square miles. Civil population (1938), 12,798. Angaur supplied 20 percent of Japan's phosphate needs—the total deposits of the island being estimated at 2,400,000 tons. The laterite deposits contain a large amount of bauxite. There are many good anchorages for ships and a large harbor at Malakai. During September, 1944, United States armed forces captured the islands of Palau and Angaur. After the defeat of Japan all the islands passed under Allied control.

PALESTINE. A part of the former Turkish province of Syria, governed by Great Britain as Mandatory

Power since Sept. 29, 1923. Area, 10,429 square miles. Capital, Jerusalem.

Government. Palestine is a Class A Mandate administered by a British High Commissioner, who is assisted by various officials—British, Jewish, and Arab. The country has been divided into six districts, each under a district commissioner.

In governing Palestine the British have found it advisable to give considerable autonomy in certain matters to the Moslem, Jewish, and Christian communities. The religious affairs of the Moslems are controlled by the Moslem Supreme Council, and questions involving their personal status are under the jurisdiction of the Sharia courts. The Jewish community is organized under an elected assembly and a general council (*Va'ad Leumi*). The community operates its own schools and has courts with jurisdiction over certain matters of personal status. Much the same situation exists for the several Christian communities.

There is also a Jewish Agency, a quasi-governmental body, composed of both Zionists and non-Zionists, which concerns itself with the establishment of the Jewish National Home, promised in the Balfour Declaration of Nov. 2, 1917. Finally, there is a regular hierarchy of courts instituted by the Mandatory Power to sit in criminal cases and in such civil suits as do not come before the religious tribunals. The police force is composed of British, Arab, and Jewish elements. The official languages are English, Arabic, and Hebrew.

Events, 1945. Political conditions in Palestine continued to deteriorate during the year. On Jan. 3 Sir Edward Grigg, who had succeeded Lord Moyne as British Minister of State in the Middle East, told the Jews that they must eliminate gangsterism or the Christian world would come to oppose Zionism. On Jan. 10 the two Jewish youths accused of having murdered Lord Moyne confessed before the military tribunal in Cairo that they had been sent by their political organization in Palestine to commit the crime. After a trial they were sentenced to death and hanged on March 22 (see EGYPT).

In anticipation of an Allied victory over Germany, the Jewish Agency had already begun laying plans for bringing more than a million Jews from Europe into Palestine, according to a statement of its chairman, David Ben Gurion, on Dec. 29, 1944. He described the White Paper as a "relic." Statements of this sort only solidified Arab resistance and undoubtedly helped to make possible the creation of the Arab League in Cairo during the conferences of February and March (see PAN ARAB AFFAIRS).

Though Palestine was technically not admissible to the League, as it was not an independent state, it was nevertheless allowed to send a representative and to have a vote on the Council. The delegate did not, however, sign the Pact of Cairo on Mar. 22.

The problem of how to govern Jerusalem with its discordant racial and religious elements became acute during the spring. On Mar. 21, Lord Gort, the High Commissioner, proposed that the mayoralty of the city be rotated among the Moslem, Jewish, and Christian communities. The Arabs opposed this idea. In April it was proposed that Jerusalem be divided into Jewish and Arab parts, each with its own municipal officials. This did not prove to be feasible. Finally on July 11 it was announced that the Holy City was to be ruled by a five-man commission. It was now the Jewish turn to protest.

On Apr. 27 the Palestine Government announced the imposition of higher taxes on corporations and a new war profits levy. The financial year, which closed on Mar. 31, showed a deficit of around

£P3,500,000 despite a rise of £P2,500,000 in tax receipts. One of the principal drains on the treasury was the £P5,000,000 spent on subsidies for cereals, flour, and meat. The citrus industry also required help since several years would pass before it could recover from its wartime slump. The continued inflation obliged the Government to enforce price controls and to fight the black market. At the time this report was issued, the price index was 258 (100 being the prewar level).

Both Zionist and Arab organizations presented their cases at the San Francisco Conference. The Arabs had the advantage of being officially represented through five independent states. However, the Conference ruled that the Palestine problem was not one for its consideration.

On May 24 the Kirkuk-Haifa pipeline was blown up in two places—the first time that damage had been inflicted on this important artery since the beginning of the war. The Iraq Petroleum Company nevertheless went ahead with its plans to lay a new pipeline paralleling the old one and to expand its facilities at Haifa.

The thirty-seven American State Governors who met at Mackinac Island in early July joined in petitioning President Truman to raise the issue of opening Palestine to further Jewish colonization at the forthcoming Big Three meeting [at Potsdam]. The Zionists were meanwhile taking comfort from the sweeping Labor victory in the British elections. Laborites had upon various occasions made pro-Zionist declarations. At the World Zionist Congress which met in London early in August the open door for Jewish immigration into Palestine was vociferously demanded. An interesting straw in the wind at this time was an editorial in the London *Times* of Aug. 15 which described the issue in Palestine as "a conflict of two rights," and came out for partition as the most practicable solution, despite the fact that the Peel Commission had unsuccessfully proposed this drastic remedy in its report of 1937.

The tactics of both Arabs and Zionists included constant efforts to commit the American and British governments to action favorable to their side. For example, in a press conference on Aug. 16, President Truman called for the free and open settlement of Palestine and revealed that he had raised at Potsdam the question of the need for a Jewish National State in Palestine. This called forth from Abdul Rahman Azzam Bey, Secretary General of the Arab League, a rejoinder that President Roosevelt had promised Ibn Saud in February that he would not support the Jews in Palestine. After heated discussions throughout the Middle East and Anglo-Saxon world, Secretary of State Byrnes on Oct. 18 finally revealed the text of the correspondence exchanged between Ibn Saud and the late President. The Arab monarch's letter, dated Mar. 10, after giving a long recitation of Arab claims to Palestine, reminded the President of his verbal promise to assist the Arab cause. In his reply, dated Apr. 5, Mr. Roosevelt stated that his government had already made clear its "desire that no decision be taken with respect to the basic situation in that country [Palestine] without full consultation with both Arabs and Jews." Zionist denunciations were immediate and vociferous. The Arabs, to back up their case, on Oct. 20 published a joint memorandum from the governments of Egypt, Iraq, Lebanon, and Syria which had been handed to Secretary Byrnes on Oct. 12, and which warned that war would follow any attempt to set up a Jewish state in Palestine. Three days later the American Zionist Emergency Council presented a very force-

ful memorandum to Mr. Byrnes giving its side of the story.

Meanwhile Mr. Chaim Weizmann had on Sept. 24 revealed the Jewish Agency's refusal of Britain's offer to permit 1,500 Jewish immigrants a month to enter Palestine. By October the situation had reached a virtual stalemate which some of the more belligerent Jewish elements had obviously decided could be resolved only by violence. British troops poured into the country, while both the Arab and Jewish police were disarmed. In the north and east there was an increasing number of clashes between Jewish settlers and the Trans-Jordan Frontier Force. On Oct. 8 the Jews staged a five-hour general strike and organized large but orderly demonstrations as a protest against British policy. Two days later over 200 European Jews being held in a detention camp near Haifa were freed by force. At least two people were killed in this incident.

By Oct. 11 the situation had become so explosive that it was decided to evacuate American troops from Palestine as fast as possible. One of the complications which the American officers wished to avoid was the use of American arms by Jewish terrorists who had developed a technique for raiding Allied munitions depots. Oct. 26 marked the arrival at Haifa of 997 Jewish immigrants, the last to be admitted under the provisions of the White Paper of 1939.

By the end of October most of the Arab parties in Palestine except the largest (controlled by the Husseini family) had apparently agreed to revive the Arab Higher Committee, dissolved by the British before the war. Finally on Nov. 22 the Committee was reconstituted with twelve members said to represent some three-quarters of the Arabs in Palestine. This coalition had been brought about through the intervention of outside personalities connected with the Arab League, notably Jamil Mardam Bey from Syria. One-half of the newly formed Committee consisted of representatives from the important Husseini Party, which had until then been unwilling to cooperate.

Early in November the tempo of acts of violence committed by Jewish terrorists increased markedly. Railroads were blown up in many places, coast guard stations were attacked, bombs were set off in public buildings. The curfew was imposed over a large part of the country. More British troops were sent in and the Jews were warned that violence only jeopardized the achievement of their aspirations.

On Nov. 2 Lord Cort resigned as High Commissioner to be replaced by Lieutenant-General Sir Alan Cunningham. On the 13th Foreign Secretary Bevin made a long statement before the House of Commons in which he reminded his listeners that the Arabs had rights and that they should not be called upon to bear the full weight of the results of European persecution of the Jews. After this speech he told American correspondents that Palestine was scheduled to become a trustee state of the UNO and that it eventually would obtain self-government, but as a Palestinian, not as a Jewish, state. On the same day President Truman announced that the United States had accepted Britain's proposal for the appointment of a twelve-man joint commission to sift the facts concerning Palestine and to make recommendations. The American chairman of this commission was Judge Joseph C. Hutcheson of Houston, and his British colleague was Sir John E. Singleton. On Dec. 11 the Arabs in Palestine declared that they would not cooperate with the commission.

The Foreign Relations Committee of the U. S.

Senate on Dec. 12 voted 17 to 1 in favor of a resolution calling on its government to use its good offices with Great Britain to reopen Palestine to Jewish immigration. On the 17th the Senate passed this resolution by an overwhelming vote, and two days later the House of Representatives approved it by 133 to 36.

The Bevin statement merely inspired the Zionist extremists to more acts of violence. A climax came when on Dec. 27 terrorists blew up a police building in the middle of Jerusalem. As a result of this and other outrages at least ten persons were killed. Some 1,500 Jews, including prominent citizens, were rounded up for identification and questioning in Jerusalem alone. By the end of the year British troops were conducting wholesale manhunts and the Holy Land seemed to be rapidly falling into a state of open insurrection.

The People. The number of inhabitants in Palestine can only be estimated. There were probably more than 1,800,000 at the end of 1945, divided approximately as follows: Moslems, 1,100,000; Jews, 600,000; Christians, 140,000. During the last twenty-five years the population of Palestine has increased 300 percent due to the large-scale immigration by both Jews and Arabs and to the high birth rate of the latter. The Moslems and most of the Christians are Arabs and speak Arabic as their native tongue. Hebrew is widely used among the Jews, though many of those who migrate to Palestine from Europe have to learn it as an entirely new language. The adaptability of the ancient Hebrew tongue to modern uses has been one of the interesting by-products of Zionist colonization.

There are still many nomads or semi-nomads, chiefly in the south. Due to the tremendous urban development of recent years, nearly half the population now lives in towns or cities. The larger cities, with their estimated populations, are: Tel Aviv, 175,000; Jerusalem, 160,000; Haifa, 125,000; Jaffa, 100,000. Tel Aviv is an all-Jewish city, while half or more of the inhabitants of Haifa and Jerusalem are Jewish.

In 1942-3 the Government operated 503 schools for the Arabs. Education for Moslem girls is making rapid strides. There were also 161 private Moslem schools. In the Hebrew educational system there were 488 schools, including a number of secondary and technical institutions. Jewish private schools numbered 297. The Christian communities operated 181 schools. On Mount Scopus near Jerusalem is the Hebrew University, which is one of the foremost centers of higher learning in the Near East.

The Economy. Most of Palestine presents a picture of barren hills and treeless steppes. The succession of peoples who have lived in the country since the beginning of historic time have denuded its once extensive resources of soil and forest. Today this process is gradually being reversed. The influx of Jewish colonists and capital has led to a remarkable agricultural and industrial revival, in which the Arab population has also widely shared. The results of Jewish settlement on the land are especially noticeable on the maritime plain, the Emek (or the valley of Esdraelon) and in the northern Jordan valley. Some 410,000 acres were in Jewish possession in 1943. Further acquisitions were virtually prohibited by the White Paper of 1939.

The volume of the country's agricultural production is shown by the following figures: 13,000,000 cases of oranges and 2,000,000 cases of grapefruit were exported in 1938-9 (exports dropped during the war but are picking up again); milk production in 1943, 120,000,000 litres; average output of olive

oil, 7,000 tons. Other crops for 1943 were: wheat, 63,895 tons; barley, 56,025 tons; fresh non-citrus fruit, 280,053 tons; vegetables, 213,767 tons. In the same year there were 242,945 cattle, 244,062 sheep, 325,376 goats, 29,736 camels and 107,736 donkeys. Many other products could be mentioned by way of illustrating the considerable diversification attained by the country's agricultural and pastoral economy. Reforestation has also been undertaken on a small scale.

The manufacture of many small items has increased greatly, due to the immigration of skilled workmen and artisans from Europe (for statistics see YEAR BOOK for 1944, p. 457). There are extensive oil refineries in Haifa at the western terminus of the pipeline from Iraq. The vast mineral resources of the Dead Sea are exploited by the Palestine Potash Company.

In 1938 imports (principally foodstuffs, textiles and machinery) were valued at £P11,356,963 and exports were £P5,020,368. Haifa has the only modern harbor in Palestine. At Jaffa and Tel Aviv vessels of any size must anchor out and be serviced by lighters. The railway mileage is 334 kilometers of standard gauge and 112 kilometers of narrow gauge. The completion of the line from Haifa through Beirut to Tripoli during the war put Palestine into direct rail communication with Istanbul. The road system of Palestine has been greatly improved and extended under British administration.

ROBERT GALE WOOLBERT.

PALMYRA ISLAND. An atoll in the Central Pacific, belonging to the United States. Lying 1,109 air miles southwest of Honolulu and 1,513 miles northeast of Pago Pago in American Samoa, it is an important station on the Hawaii-Samoa air route. Land area, 1½ square miles. Population (1940 census), 32. The U.S. Navy Dept., which has jurisdiction over the island, converted it into a naval air station.

PANAMA. A republic of Central America. Area: 28,575 square miles, excluding the Canal Zone of 553 square miles. Population: 631,637 (1940). Capital: Panama.

Most of the surface of Panama is covered by low mountains and hills; a gap between the mountain ranges provides the lowland through which the Canal passes. The climate is mostly hot and humid, but on the Pacific side of the mountains it is drier and more healthful. The mean annual temperature is 80 degrees.

Government. Panama is a centralized republic of 7 provinces and 1 intendencia. The Constitution of 1940 provided for a uni-cameral National Assembly of 32 members, to meet annually for four months, beginning on Jan. 2. The President and members of the Assembly were elected directly and concurrently for 6-year terms. The president was aided by a Cabinet of 6 members. President Ricardo Adolfo de la Guardia dissolved the Assembly in December, 1944, and called elections for a Constituent Assembly, which convened in June, 1945, and selected Enrique A. Jiménez Provisional President.

The People. Fifty-eight percent of the total population of Panama is mestizo, 17 percent of European descent, 15 percent Negro, and 9 percent Indian. The largest concentration of population is in the vicinity of the Canal Zone and in the north-central region. The largest cities are: Panama, 111,893; Colón, 44,393; and David, 9,222. The small foreign population forms the dominant economic group.

Spanish is the official language. Roman Catholicism is the predominant religion.

According to the census of 1940, 64.7 percent of the population over 10 years of age (excluding Indians) is literate. In 1942 there were 74,039 students enrolled in 670 elementary schools; 8,407 students in 29 intermediate schools; and 857 in the University of Panama. During 1945 the Panamanian Government provided funds for 86 new schools.

National Economy. The economic life of the country is influenced to a large extent by the Panama Canal. Major economic activities are associated with the passage of goods through the Canal, and in recent years construction activities in the Canal Zone and provision of commercial services for military and civilian personnel have played an important part in the economy of the rest of Panama. Agriculture is the chief occupation. Bananas are the principal export crop, and cocoa and abacá are also raised for export. Rice, corn, coffee, sugar, tobacco, beans and fruits are grown for local use. Cattle raising, rubber production, and exploitation of forest products are also important.

Industrial development has been limited by the small size of the local market. Sugar and rice are processed, and shoes, soap, beverages, hats, furniture, and clothing are manufactured.

Foreign Trade. Exports during 1944 were valued at \$2,809,982, compared with \$1,934,123 in 1943; this reflected increased shipments of bananas and abacá. Total exports of bananas in 1944 amounted to 1,159,000 stems; of abacá, 6,000,000 pounds. Rubber exports to the United States in 1944 totaled 816,726 pounds. Cocoa exports decreased from 2,789 metric tons in 1943 to 1,455 metric tons in 1944.

Panama's imports for 1944 were valued at \$38,000,000, of which 66 percent originated in the United States. Manufactured goods and foodstuffs were the chief imports.

Events. The year opened in the midst of a political crisis in Panama. The Cabinet had resigned and a new one had been named on Dec. 31. The change was interpreted as a victory for President Adolfo de la Guardia, since it gave broader representation to the parties which supported him. He refused the demand of the Junta de Notables (a group of political leaders, lawyers and businessmen) that he resign and declared that he intended to remain in office until June 15 unless the administration parties demanded his removal. The censorship imposed on the newspaper, *Panama American*, was lifted and the National Youth Congress, which was calling for a general strike, was permitted to continue its sessions. It refused to commit itself on its future attitude, but agreed to negotiate with the Government. United States forces in the Canal Zone were confined to barracks.

On Jan. 4, 15 members and 3 alternates of the National Assembly who had fled the country, re-crossed the border secretly into Panama and elected Jephtha Brawner Duncan, 59-year-old educator and journalist, First Vice President of the republic. Duncan immediately challenged the right of de la Guardia to continue in office, charging that, in accordance with the suspended Constitution, he should succeed the Acting President on Feb. 15. Seventeen non-opposition assemblymen declared the acts of the rump Assembly were illegal and reasserted their support of de la Guardia. The unrest spread to Panama's third largest city, David, where the police fired overhead and used sticks to disperse an anti-de la Guardia demonstration.

On Jan. 5 the new "Coalition Cabinet Govern-

ment" of de la Guardia issued a statement that it was "taking all measures leading to the holding of a strictly pure election" for members of a constituent assembly and was maintaining at all times "tranquillity and order." It promised to continue close and cordial relations with the United States, to defend the Panama Canal and to fulfil loyally international pacts, especially "those related to the war effort of the United Nations." The crisis died down as seven out of the country's eight parties agreed to cooperate with the President, and elections were called for May.

The rump National Assembly continued to function for a little while in the Canal Zone. On Jan. 31 it elected Alfredo Alemán president of the assembly, and two weeks later (Feb. 15) it completed its organization by swearing in Duncan as Acting President of Panama, and naming a seven-man Cabinet. It issued a manifesto on Mar. 8 in which it reasserted its claim to be the one legal and authentic government of Panama. President de la Guardia declined "to dignify this action by any comment." By early March all but eight or nine of the refugee assemblymen had returned to Panama, apparently unmolested by the police. And on Mar. 9 the last two of the exiles flew to Costa Rica, ending even the semblance of a government-in-exile in the Canal Zone. On June 11 de la Guardia issued a decree granting amnesty to 29 persons charged with subversive activities against his administration. Later that month Duncan himself was back in Panama trying to organize a union of all liberal groups.

Heavy voting marked the special election for a Constituent Assembly on May 6. Women, who were voting for the first time, turned out in large numbers. The pro-Government coalition of six parties won 39 out of 51 seats. The opposition Renovation Party, however, won 12 seats, which was more than any one of the coalition parties secured.

The Constituent Assembly convened on June 15 to adopt a new constitution and to restore the nation to a legal basis after nearly four years under provisional regimes. De la Guardia resigned on the same day, and the assembly elected former Ambassador in the United States Enrique A. Jiménez Provisional President. Of a total of 51 votes, Jiménez received 30 and Roberto Chiari 12; the remaining nine were blank. The Assembly also elected Ernesto de la Guardia, Jr. and Paul Jiménez as First and Second Vice Presidents, respectively. The new Provisional President declared that he wanted to strengthen relations with the United States, invite foreign capital to Panama, and develop commerce and industry.

In Buenos Aires, meanwhile, exiled former President Arnulfo Arias charged that he was still Panama's constitutional President and would remain as such until his term expired in February, 1947. He was trying to return to Panama, Arias asserted, but the Panamanian consulate refused to give him a visa. A campaign to obtain permission from the Government for Arias's return was opened by a demonstration in Colón in August, and on Aug. 13 the Panamanian consulate in Buenos Aires was instructed to give him a passport. Arias left Argentina on Oct. 3 and arrived in Panama City Oct. 13. Addressing an elaborate welcoming demonstration of his followers, he declared that "the imperialistic sector of Washington is treating Panama like an inferior conquered nation" and that the Good-Neighbor policy has been turned into a "wolf in sheep's clothing." He indicated his intention to participate actively in politics by stating that he

had returned to Panama to "serve the people in any capacity they demand." The Republic of Panama was declared out of bounds for United States soldiers during Arias's arrival. This move was criticized locally as ill-advised and likely to have harmful repercussions among the people of Panama.

On Oct. 16 President Jiménez, in apparent answer to Arias, denounced as "unjustified" any sentiments of hostility in Panama toward the United States, and a week later he warned that the Government was prepared to repress severely any attempt to disturb public order. He added that political activity by Arias's followers had increased greatly. On Oct. 19, 41 of 51 members of the Constituent Assembly condemned "recent hostile acts and statements attacking the Good-Neighbor policy" made by former President Arnulfo Arias. The general secretary of the Assembly warned that democratic elements must be prepared to oppose the "strong weapons or organization . . . and terroristic tactics" of Arias.

Saber-wielding police broke up a meeting held on Oct. 25 by followers of Arias, during which the former President again asserted his claim to the presidency. Other speakers violently attacked the Constituent Assembly and demanded that dates be set for a presidential election and the term of office of the Provisional President. Four days later Arias was arrested on order of the Mayor of Panama City, on the charge that he had incited rebellion and insulted the police officer in charge of the detachment which broke up his meeting. Arias admitted that he had called the officer a traitor but denied that he had "abused him." Arias was released on bail Oct. 30.

On Oct. 29 a home-made bomb was thrown against the capital's principal jail. Another bomb was thrown Nov. 4, this one at a house owned by former President Augusto Boyd. Aides of Arias were arrested and the President declared that "terrorists will not achieve their aim of creating confusion in order to overthrow the present authorities." Panamanian political commentators thought that the terrorists were trying to drive United States authorities to forbid United States troops in the republic, thereby making their campaign easier.

Arias was detained for an hour on Nov. 26 on charges of assaulting a police lieutenant. Two weeks later the Government was reported holding incommunicado five men who had been trying to buy arms from United States soldiers. Two of them were described as Arias men.

On Dec. 21 Arias was again arrested on charges of instigating an abortive revolution in Colón. Twenty-five of his followers, including prominent businessmen and two of his brothers-in-law, were also seized. The revolt had taken the form of an armed midnight attack on the Colón police station and telephone exchange, in which at least 6 persons were killed and 12 wounded. Police called this the "most violent attempt against the Government in 15 years," and President Jiménez laid the responsibility for it on Arias's supporters, although he did not directly implicate the former President himself. Arias said: "I knew nothing about what happened in Colón until I read the morning papers. I am not involved in any subversive plan but only in a civic campaign to re-vindicate the Panamanian people and the republic." There were more arrests later, and the police announced that their investigations showed the plotters had planned simultaneous attacks, which failed to come off, in Colón and Panama City. Arias was still in custody as the year ended.

On Dec. 28 the Constituent Assembly passed a

record high 1946 budget of \$30,000,000, of which \$1,161,907 was allocated for foreign debt service, \$11,600,000 for internal administration, \$8,200,000 for public works, and \$5,140,000 for education.

Panama's first major labor dispute of recent years came on Dec. 10, when printers of the three leading capital dailies, *Estrella de Panama*, *La Nación*, and *Panama American*, struck after the failure of negotiations for a minimum wage. Members of the painters' and carpenters' unions staged sympathy walkouts. The papers resumed publication on Dec. 12, when the printers agreed to a truce.

There were no major developments in relations between Panama and the United States during the year. On May 17, water and sewage systems in Panama City, under United States ownership, were transferred to the Panamanian Government by executive order of President Truman. The United States Embassy issued a statement on July 8 that the 1942 rubber contract between Panama and the Rubber Development Corporation had been extended until June 30, 1947. The United States will be required to vacate defense sites in Panama by Sept. 1, 1946, Foreign Minister Ricardo J. Alfaro stated on Nov. 7 in an official interpretation of the agreement under which the sites were granted. It was revealed that 60 out of 83 United States defense installations in Panama had already been returned.

Panama severed diplomatic relations with the Franco Government of Spain on June 30. On Sept. 16, the general secretary of the Presidency declared that new relations with the exiled Spanish republican regime in Mexico constituted "renewal" rather than original recognition. Panama did not consider it necessary to make a formal recognition, but was merely resuming interrupted relations with the legal republican Government of Spain.

On Nov. 28 the Constituent Assembly approved unanimously a resolution requesting the Government to begin immediate inter-American consultations on the breaking of diplomatic relations with the Dominican Republic, Honduras and Nicaragua. This action followed presentation to the assembly of seven Nicaraguan political exiles.

HARRY B. MURKLAND.

PANAMA CANAL ZONE. A strip of land crossing the Isthmus of Panama and extending about five miles on each side of the canal between the towns of Cristobal on the Atlantic Ocean and Balboa on the Pacific Ocean. By treaty with the Republic of Panama in 1903 the United States leased the Canal Zone in perpetuity at an annual rental of \$250,000 (gold currency). In 1933 the United States went off the gold standard and since then the annuity has been fixed at \$430,000 payable in any currency. Area, 552.95 sq. mi., including 190.94 sq. mi. of water. Balboa Heights is the administrative center.

Population. The 1940 U.S. census reported 51,827 persons, both civilian and military, in the Canal Zone. Of this number less than one-half were whites from the United States. The remainder were mostly Negroes who were born or had parents who were born in the English-speaking West Indies. This accounts for the wide-spread use of English in the Canal Zone. Illiteracy was low in the white civilian population but higher among the Negroes, 16.8 per cent in 1930. Public schools for both whites and Negroes are supported by Congressional appropriations.

Panama Canal Finances. For the fiscal year ended June 30, 1944, there was a net deficit from tolls and other sources of \$5,367,631. The net capital

investment in the Canal, after depreciation, as of June 30, 1944, was \$655,795,477, including \$128,991,063 interest on funds borrowed to construct the Canal up to the formal opening on July 12, 1920.

Economic Conditions. The Panama Canal Zone is a U.S. military reservation whose principal industry during peacetime is the maintenance and operation of the Panama Canal. Only employees of the United States may live in the Canal Zone and all employment is restricted to government ventures. Recent data on shipping traffic, financial operations, and commerce were withheld for military reasons. See YEAR BOOK for 1943, p. 521.

Government. A civil government was authorized by Congress by the Panama Canal Act of 1912 and general supervision delegated to the Secretary of War. Administration rests, normally, in the hands of a Governor appointed by the President for a period of four years, but in wartime it is under the authority of the commanding general of the Panama Canal Department, U.S.A. Subject to such superior authority the scope of government goes much beyond the functions of government in the other territories. The Governor's duties can be compared to those of an executive in the efficient management of a vast business organization. An Executive Secretary, appointed by the Governor, is responsible to him.

Events, 1945. The influential newspaper *Nacion* of Santiago, Chile, reported that an attempt by German saboteurs, in March, to destroy the canal by blowing up a merchant vessel loaded with explosives had been uncovered. Another plot by Germans to blow up the Gatun Dam by landing saboteurs on board a submarine in the vicinity of the canal was also reported by a liberated Irish soldier whose aid had been solicited. The Republic of Panama took steps to insure the security of the canal by exercising greater vigilance and control over the issuance of visas and special permits to non-citizens.

In the Congressional hearings on bill H.R. 4480, Maj. Gen. Joseph C. Mehafee, Governor of the Panama Canal Zone, stressed the need for further investigation on increasing the security of the Panama Canal not only against the atomic bomb, but also against the conventional type of bomb. Further study was also recommended to determine the relative vulnerability of a lock canal as compared to a sea-level canal. Previous plans had specified that a third set of locks be 140 feet wide and 1,200 feet long. The existing locks were 110 feet wide and 1,000 feet long.

Locks in use were not wide enough to allow the largest Navy airplane carriers in service to pass through and the Navy Department went on record in favor of a width of more than 140 feet for the third set of locks. Between July 1, 1940, and June 30, 1945, about \$75,000,000 of the \$227,000,000 authorized by Congress had been spent on this project.

The capacity of the Canal was estimated to be 42,000,000 tons a year and the maximum traffic through the Canal in its two peak years, 1930 and 1939, amounted to 27,000,000 tons. It is also noteworthy that during World War II commercial and military traffic did not exceed peacetime peaks. Tolls collected during the war only totaled between 5 and 6 million dollars annually as compared with 27 million dollars in 1939. All ships carrying any amount of commercial cargo were required to pay tolls while ships carrying government cargo alone were not required to pay.

CHARLES F. REID.

PAN AMERICAN ACTIVITIES. Problems within and without the Continent confronted the American Republics in their international relations during 1945. Internally, the principal issue revolved around Argentina and its relations with other members of the inter-American community. Externally, the most important question confronting the Pan American system during the past year was its position in relation to the world organization.

The Argentine Question. In March the Argentine Government declared war against Germany and Japan, thereby completing the alignment of the Western Hemisphere against the aggressor states. Despite this act, the internal situation in Argentina continued to affect the general international relations of the American Republics throughout the year.

Toward the end of 1944 the Government of Argentina had proposed that the Governing Board of the Pan American Union convene a meeting of Foreign Ministers "to consider the existing situation between the Argentine Republic and other American nations." Because of the unwillingness of a number of governments to participate in such a meeting with representatives of the Argentine regime, action on the request was deferred. In February, the Inter-American Conference on Problems of War and Peace met at Mexico City, from which meeting Argentina was excluded.

The Argentine question was thoroughly discussed at Mexico, and a resolution adopted in which the Conference expressed the hope "that the Argentine Nation may put itself in a position to express its conformity with and adherence to the principles and declarations resulting from the Conference," and also that it might "orient its own policy so that it may achieve its incorporation into the United Nations." Shortly after the Conference Argentina declared war against Germany and Japan and signed the Final Act of the Mexico City conference, following which normal diplomatic relations were resumed with Argentina by the other Republics of the Hemisphere.

As a consequence of these measures the American Republics generally supported the admission of Argentina to the United Nations Conference at San Francisco. As a result of this backing Argentina was invited to take her seat with the other representatives drawing up the charter for the world organization, but only after a number of sharp exchanges that attracted wide attention.

The solidarity of the Hemisphere was again called into question in October when the United States indicated its unwillingness to participate with Argentina in a proposed conference at Rio de Janeiro, to draw up a permanent inter-American treaty of mutual assistance. At the suggestion of the United States the Rio de Janeiro conference was postponed to the spring of 1946. A further outgrowth of the Argentine situation was a proposal made by the Minister of Foreign Affairs of Uruguay in November, suggesting a limitation on the doctrine of non-intervention and the possibility of collective intervention to assure respect for certain fundamental rights and fulfillment of freely contracted international obligations. Although couched in general terms, the proposal was generally construed as arising out of conditions prevailing in Argentina.

The Chapultepec Conference. The Inter-American Conference on Problems of War and Peace met at Mexico City from Feb. 21 to Mar. 8. In addition to the action taken on the Argentine situation, the conference adopted sixty other declarations and resolutions.

Among the significant conclusions of the conference was the Act of Chapultepec, which declares that "every attack of a State against the integrity or the inviolability of the territory, or against the sovereignty or political independence of an American State," shall be considered an act of aggression against the other signatories. Similar declarations had been adopted previously by the American Republics in so far as their relations with non-American states are concerned. The innovation in the Act of Chapultepec is the fact that it is also directed at "an act of aggression of an American State against one or more American States."

Because of constitutional limitations confronting some governments, among them the Government of the United States, in accepting commitments of the nature involved, the Act of Chapultepec was given only a provisional form, to operate only for the period of the war. It was with a view to drawing up a permanent treaty to embody the principles of the Act that the Government of Brazil issued invitations for an Inter-American Conference for the Maintenance of Continental Peace and Security to meet at Rio de Janeiro on Oct. 20. Because of the unwillingness of the United States to participate in such a conference with representatives of the existing Argentine Government, the meeting was postponed. Subsequently, the Governing Board of the Pan American Union agreed that the conference should be held between Mar. 15 and Apr. 15, 1946, the exact date to be determined by the Government of Brazil.

Reorganization of Inter-American System. Another important resolution of the Mexico City conference related to the reorganization of the inter-American system, a broadening of the scope and a strengthening of the agencies through which it functions. The Governing Board of the Pan American Union was authorized to take action "on every matter that affects the effective functioning of the inter-American system and the solidarity and general welfare of the American Republics." This constitutes a delegation of political authority to the Governing Board, the exercise of which heretofore has been denied to the Pan American Union.

The conference further agreed that the Governing Board of the Pan American Union should be composed of special representatives appointed by the governments, and specifically precluded the appointment of members of the diplomatic missions accredited to Washington. This proposal received a majority vote at Mexico City, but it subsequently met with considerable opposition, partly because of a doubt as to the wisdom of the move and partly because of the additional financial burden that such special representation would entail. On the initiative of a number of countries opposing the change and as the result of an inquiry addressed to the governments, the application of this particular feature of the Mexico City resolution was suspended until it could be given further consideration at a future inter-American conference.

The Mexico City resolution also stipulated that the Chairman of the Governing Board of the Pan American Union shall be elected annually and shall not be eligible for re-election for the term immediately following. This provision was put into effect at the meeting of the Board held on December 5, at which time the Ambassador of Brazil, Carlos Martins, was elected Chairman for the coming year. At the same time the Ambassador of Paraguay, Celso R. Velázquez, was elected Vice Chairman.

The San Francisco Conference. In addition to the question of the admission of Argentina, a more

fundamental issue that presented itself at the San Francisco conference to formulate a charter for the United Nations was the question of the relation of the inter-American system to the world organization. Among the Latin American delegations there was a strong desire for a maximum degree of autonomy in the settlement of disputes and the preservation of peace in the Western Hemisphere. As finally drafted, the charter established a relationship between the world and regional systems which may be summarized as follows:

1. The Security Council may investigate any dispute that may lead to international friction or give rise to a dispute, but regional agencies or arrangements are primarily responsible for seeking a pacific settlement before disputes are referred to the Council.

2. The right of any group of nations to enter into agreements for self-defense is recognized. Consequently, the Act of Chapultepec and the permanent treaty that will embody the principles of the Act are entirely in harmony with the World Charter.

3. Should any nation party to such a defense agreement be attacked, the other contracting states may carry out their obligations to join in its defense, as an emergency measure and until the Security Council has taken measures to maintain international peace and security.

4. The Security Council retains the right to intervene directly whenever it may deem it necessary in order to maintain or restore international peace and security.

Economic Relations. Equally important as the political and diplomatic problems that arose during the year were those of an economic character. For the Latin American countries these were especially serious, as most of them had experienced a marked increase in production to meet wartime demands, and the conclusion of the war raised the problem of future markets for this expanded output.

Economic questions occupied a considerable part of the program of the Mexico City conference. One of the important conclusions of the meeting was the adoption of an Economic Charter of the Americas, which set forth a series of principles and a number of objectives which the American Republics would seek to achieve.

The conference also created an Inter-American Economic and Social Council, established by the Governing Board of the Pan American Union, and beginning to function on Nov. 15. Spruille Braden, Assistant Secretary of State of the United States, was elected Chairman of the Council, and Hector David Castro, Ambassador of El Salvador, was named Vice Chairman.

Preparations were also made for an Inter-American Economic Conference to meet at the Pan American Union on Nov. 15. Because of an inability to complete the preparatory studies, this meeting was postponed to April of 1946. In the meantime, the Economic and Social Council was requested to select and formulate recommendations on those economic and social problems of greatest urgency affecting the welfare of the American Republics.

L. S. ROWE.

PAN ARAB AFFAIRS. One of the things which many observers of Middle East affairs had long predicted could not happen was Arab unity. The Zionists in particular embraced this idea with fervor. The Arab was too much of an individualist, they maintained, and the different rulers of Arab countries were too jealous of each other ever to come to-

gether even in a loose political federation. The events of 1945 proved these prophets to be wrong. And it is no exaggeration to say that the most important factor in bringing about the Arab League was Zionism.

Even the Arab women, who are only on the threshold of emancipation after centuries of harem life, showed their solidarity at a historic meeting in Cairo (Dec. 14-15, 1944). Representatives were present from Egypt, Palestine, Trans-Jordan, Syria, Lebanon and Iraq, but not from Saudi Arabia, where Ibn Saud enforces strict seclusion upon all women.

Ibn Saud did, however, come out definitely for a Pan Arab league in January and promised to send representatives to the organizing conference at Cairo in February. Relations between Saudi Arabia and Egypt, somewhat cool in recent years, became friendly after King Farouk's visit to Ibn Saud in the Hejaz late in January (see ARABIA; EGYPT) and this also contributed to Arab solidarity. Even the Yemen was reported in early February to be ready to become a member of the proposed league.

The delegates from the Arab countries met in Cairo on Feb. 14 to begin preliminary conversations. As they convened the ticklish problems of Lebanese and Syrian independence and of Jewish immigration into Palestine were very much in the foreground. At this very time, too, President Roosevelt and Prime Minister Churchill visited Egypt and conversed with Middle Eastern personalities such as Ibn Saud, King Farouk, and the President of Syria. President Roosevelt gave the Arabian monarch an undertaking, later put in writing, not to take any decision with respect to Palestine "without full consultation with both Arabs and Jews" (see ARABIA; PALESTINE).

On Mar. 3 the delegates completed a draft constitution which was to be put before a plenary session on Mar. 17. Delegates from Tripolitania and Cyrenaica were allowed to present their cases but were not admitted as members. From the conflicting reports it was not altogether clear to what extent the Yemen was represented at, or committed by, the acts of the conference. Finally, on Mar. 22 the definitive pact was signed on behalf of Egypt, Saudi Arabia, Trans-Jordan, Lebanon, Syria, Iraq and apparently the Yemen. The unofficial delegate from Palestine did not sign, though it was provided that Palestine was to be represented on, and have a vote in, the League's Council.

According to the *London Times* (Mar. 23, 1945) the pact comprised twenty articles and two annexes. "The pact, which covers a wide field of Arab co-operation, says that the Union shall be composed of independent States which have signed it but that any other independent Arab countries are eligible for membership. The second article defines the Union's aims, which are the strengthening of friendship between the members, the coordination of their political action, and the safeguarding of their independence.

"The Union council will be composed of representatives of all member States, but each State will only have one vote, regardless of the number of its representatives. The council will supervise the carrying out of conventions concluded among the members. It will also study the means by which the Union shall collaborate with international organizations.

"It is forbidden to have recourse to force for the settlement of disputes between members. If differences should arise which do not affect the independence, sovereignty, or territorial integrity of

States and if the parties to the dispute have recourse to the council for settlement of it, the council's decisions shall be binding. Parties to a dispute will not have the right to take part in deliberations or decisions of the council. Decisions in matters of arbitration and conciliation will be taken by a majority vote. Decisions of the council which are made by unanimous vote will be binding on all members, but those made by a majority vote will only bind States that have accepted them. The Union's permanent headquarters will be in Cairo but the council may decide to meet in some other city if it wishes, and the council will meet twice yearly in March and October."

The League made its debut at the San Francisco Conference when, on May 1, the representatives of the five Arab states present there filed a copy of the Cairo Pact with the Secretariat and declared that they intended to act *en bloc*. Carrying out this intention, they took various occasions during the Conference to upbraid France for her policy in Syria and Lebanon.

The first meeting of the League's Council assembled in Cairo on June 4 at the very height of the Syrian crisis (see SYRIA AND LEBANON). The Council expressed its gratitude to Britain for her intervention in Syria and demanded of the French that they withdraw at once from the two Levant states. The delegates adjourned on June 11 after having discussed measures for preventing "French aggression." The first meeting of the economic and agricultural subcommittee of the League took place at Cairo in mid-July and discussed means for achieving greater cooperation between the member states.

At the Conference of Foreign Ministers which met in London during September and October, the Russians put forward a claim for the trusteeship over Libya. This elicited from the Secretary-General of the Arab League, Abdul Rahman Azzam Bey, the declaration that Tripolitania and Cyrenaica should be independent, but that if they were to be put under a trusteeship it should be conferred upon the Arab League or an Arab state.

The second ordinary meeting of the League Council began in Cairo on Oct. 31, with the Palestine and Tripolitanian questions in the forefront. Delegations from Tripoli and from the Tunisian Constitutional Party applied for admission, which of course could not be granted as they did not represent independent States. On Nov. 10 the Council voted unanimously to follow a common policy—not specified—in regard to Palestine. On Dec. 6 it issued a reply to Mr. Bevin's statement of Nov. 13 in the House of Commons by suggesting *inter alia* that the problem of the homeless Jewish refugees in Europe could be solved much more readily and happily by sending them to the United States. See PALESTINE.

ROBERT GALE WOOLBERT.

PANTELLERIA. An Italian island (32 sq. mi.; pop., 9,000) in the Mediterranean 45 miles from the coast of Tunisia and 62 miles from the Sicilian coast. Strategically situated to dominate the shipping route between the eastern and western Mediterranean, it was fortified by Italy during 1935-37. The island has two small ports. On June 11, 1943, the island was surrendered to Allied armed forces.

PAPUA. A territory (formerly called British New Guinea) of Australia, comprising the southeastern part of the island of New Guinea (87,786 sq. mi.) and the Woodlark, Louisiade, Trobriand, and D'Entrecasteaux groups of islands (2,754 sq. mi.).

Total area: 90,540 square miles. Population (1941): 3,070 whites and 337,000 natives (estimated). Chief ports: Port Moresby (capital), Samarai, Kulumadau, and Daru.

Production, Trade, etc. The chief export crops are rubber, gold, copra, and desiccated coconut. Sugarcane, breadfruit, sago, dyewoods, spices, ginger, nutmegs, and bananas are other products. Trade (1940-41): imports £539,152; exports £492,775. Ocean-going shipping entered and cleared the ports in 1940-41 totaled 489,469 tons.

Government. Finance (1940-41): revenue £189,518; expenditure £189,297 (including subsidy from the Australian Government amounting to £42,500). In 1945 the administration of Papua was under the Australia New Guinea Administration Unit (ANGAU), headed by Maj. Gen. Murray.

PARAGUAY. A republic of South America. Area: 150,500 square miles. Population: 1,040,420 (1941) Capital: Asunción.

The eastern third of Paraguay consists of a plateau of 1,000 to 2,000 feet elevation, to the west of which is an area of low flat plains and hilly uplands. Westward from the Paraguay River stretches the vast alluvial plain of the Gran Chaco, reaching an elevation of between 800 and 1,000 feet along the Bolivian border. The climate is sub-tropical, with considerable variation in the weather and in the amount and seasonal periodicity of rainfall.

Government. Paraguay is a centralized republic of 12 departments. Under the Constitution of 1940 a unicameral Congress of 40 members is provided for. The President is directly elected for a 5-year term, and is eligible only once for reelection. The President is aided by a Cabinet of 8 ministers. A plebiscite on Feb. 15, 1943 extended the term of President Higinio Morínigo for 5 years.

The People. The population of Paraguay is composed almost entirely of persons of mixed European and Indian descent. The west-central region around Asunción is the most densely populated; north-western and eastern areas are sparsely settled. The largest cities are: Asunción, 100,000; Villarrica, 50,000; and Coronel Oviedo, 30,000.

Both Spanish and Guaraní are spoken in Paraguay, but Spanish is the official language. Roman Catholicism is the predominant religion.

Recent surveys indicate that most of the population over 10 years old have at least an elementary knowledge of reading and writing. In 1941 there were 168,465 students in 2,096 primary schools; about 6,000 in 24 intermediate schools, and 1,108 students in the National University.

National Economy. Paraguayan economy is agricultural. Cotton is the leading export crop. Some tobacco is exported, and forest products, yerba maté and quebracho are exported in quantity. Sugar and rice are the chief crops grown for domestic consumption, with limited production of coffee and beans. Agricultural production figures for 1944 (in kilograms) are: quebracho, 47,266,433; sugar, 9,891,600; rice, 8,243,410. Maté production reached 16,657 metric tons.

Cattle-raising is an important industry; there are now some 5,000,000 head of livestock in the country. In 1944, about 513,200 head of cattle were slaughtered, about 69 percent for home consumption. Total slaughtering in 1944 by the three frigoríficos (principally for production of canned corned beef) totaled 161,024 head, of which 64,265 were imported.

There is little manufacturing in Paraguay, but industrial activity showed a general increase in

1944. Leading industries are: textiles, glass, and fiber hats. Foodstuffs, beverages, tobacco products, leather goods, paper manufactures, etc., are made in small quantities.

Foreign Trade. Paraguayan exports in 1944 were valued at 42,300,000 guaranies (19 percent above 1943 exports) and exceeding imports by 11 percent. The value of export groups in gold reserve pesos for 1944 were: animal products, 10,483,556; forest products, 7,336,740; and agricultural products, 5,473,620. Principal exports for 1944 (in kilograms) totaled: quebracho, 27,273,701; canned meat, 14,491,724; cotton, 6,801,631; maté, 4,193,516; tobacco, 2,511,536; whole hides, 442,997; and grain, 201,737. Lumber exports (chiefly logs and beams) amounted to 6,864 metric tons in 1944; corned beef exports totaled 14,496 metric tons.

Imports were valued at 38,100,000 guaranies in 1944, an increase of 3 percent over 1943. Foodstuffs, cotton and metal manufactures, and machinery were among the leading items imported.

Events. The year began in Paraguay with an early January manifesto in which President Higinio Morínigo assailed political parties as a threat to unity, and declared that the armed forces were the last refuge of the nation.

The Government suspended Associated Press wire facilities on Jan. 3, charging that the AP summary of Morínigo's Christmas speech, as published by *La Nación* of Buenos Aires, "implied repudiation of ideas and concepts which compromises Paraguay's position in the international concert." The Press and Propaganda Office canceled all official subscriptions to *La Nación*. The paper suggested, on December 26, that Morínigo display greater precision in his use of the word, democracy. On Jan. 5, the suspension was extended to include AP newscasts over Radio Teleco Paraguayo. The radio ban was lifted on Jan. 8, and the AP ban on Jan. 9, after an AP official had admitted in *La Nación* that the agency had "involuntarily misquoted" Morínigo's message.

On Jan. 12 the Press and Propaganda Office issued new press regulations which required all news agencies operating in the country to register with the Office and to submit copies of all despatches, incoming and outgoing, not later than 24 hours after they are filed. This was not censorship, the Office explained. A later decree, issued on Feb. 1, required all newscasts to devote at least one-third of their time to local items and ordered every station to broadcast news in Guarani for at least three minutes each day.

A general strike began in Paraguay on Jan. 24. Morínigo placed the Army in charge of the Central Railway, Light and Traction Company, and National Brewery, and the Asunción police head forbade workers' and students' meetings and outlawed street gatherings of more than four persons. *El Paraguayo*, the government organ, declared the strike was political rather than economic, and leftist circles in Montevideo said it was a protest against attempts by the Frente de Guerra, believed to be a pro-Argentine military group, to assume full power. The Labor Ministry announced on Jan. 27 that all public and private services had returned to normal.

On Feb. 21 the President decreed dissolution of all labor unions, until they could be reorganized under a projected labor code. The move was due to recent strikes, "provoked by political elements which have infiltrated workers' syndicates," the decree stated. Exiles reaching Montevideo, Uruguay, charged that hundreds of workers and students who participated in the general strike had been sent to concentration camps in the Chaco.

They added that democratic elements continued to fight the Government. One exiled labor leader claimed that an anti-Morínigo meeting was held in Asunción on May 1, and that the police had injured many who were celebrating the fall of Berlin.

The Government denied that there were concentration camps in Paraguay, and invited *El Pais* of Montevideo to investigate. A correspondent, Carlos Borche, was sent to Paraguay early in August and returned to Uruguay on Aug. 22. Borche wrote that he had established contact with Paraguayan democrats who gave him specific data on the number and location of political prisoners. While the stories of exiles might be exaggerated, he said, he had found many prisoners in the country.

In August, Finance Minister Juan Plate resigned. Officially, he was said to have left the Government for personal reasons. Later unofficial reports said that Plate's resignation was in protest against "enormous military expenditures." He was said to have made a significant reference to "generous donations" of arms to the Asunción Government by foreign regimes (presumably Argentina).

In a speech on Sept. 27 to commemorate the fifth anniversary of his assumption of power, Morínigo declared that the armed forces "will be the irrevocable source of a flawless discipline, and an active and zealous participant in the country's redemption."

Early in November it was reported that the President, frightened by the recent revolutions in Venezuela and Brazil, had adopted new precautionary and repressive measures, including a state of siege. Several opposition leaders had recently been sent to Chaco concentration camps, correspondents wrote, as a result of an upsurge of revolutionary activity. On Nov. 27 the Government authorized reopening of trade unions, which had been closed since February.

On Dec. 1, former President Rafael Franco urged the American republics to invoke the Act of Chapultepec against Morínigo, on the ground that the Paraguayan Government threatened hemisphere security. The Paraguayan Minister in Montevideo replied to Franco by attacking the former President's record in office, and asserting that the Asunción Government was complying faithfully with its international obligations, and that civil liberties were being reestablished in Paraguay.

An alleged revolt plot was discovered and suppressed on Dec. 7. An undisclosed number of opposition leaders were arrested. The plot was apparently limited to Asunción, and was said to have been instigated by Liberals and followers of Franco.

A new wave of arrests was reported later in the month. These were said to be the outgrowth of an intra-regime feud between Morínigo and Col. Victoriano Benítez Vera, commander of the Campo Grande garrison. The affair was reported to date from Oct. 19, when Benítez Vera ordered the dissolution of the President's personal bodyguard.

In his Christmas message, Morínigo scored the exiles who were assailing his regime from abroad. He declared that his administration had honored all its international obligations, and asserted that the exiles did not understand what he had done to put public works into construction and to aggrandize national prosperity for raising the standard of living.

During December the United States protested to Asunción against passages in a book by the Chief of Staff of the Paraguayan Army, Col. Bernardo Aranda, in which he made "objectionable and offensive" references to the United States, described war as an instrument of national policy,

and advocated industrialization of Paraguay for primarily military purposes.

HARRY B. MURKLAND.

PATENT OFFICE, U.S. Exceeding by 22,463 the number for 1944, applications for patents filed in the calendar year 1945 also reached the largest total in any other twelve months since 1931. Those for designs were 8,066, or 4,355 more than in the previous equivalent period.

This increase in the quest for the protection of patents and other demands for services from the Office illustrated the shift of invention toward conditions of peace. In the twelve months ended December 31, 1945, more than 4,000,000 copies of patents were purchased. The buyers of these were principally manufacturers, large and small. Never before had it been necessary to supply so many copies.

Still another evidence of the significance of patents in the era of reconversion was the use which owners were making of the public register which the Office initiated, by sanction of the President, in June, 1945. In this register may be included and published any patents the grantees or licensees of which desire to offer them for outright acquisition or partial use by others. In the six months following its inauguration more than 9,000 patents were so recorded.

Some of the principal corporations of the country registered their patents covering chemical, electrical, and other inventions.

While there was the exceptional rise noted in the number of applications, the total of those granted did not increase. In the preceding year there were 31,197 patents as against 29,364 in 1945. Of these latter 3,524 were for designs, an excess of 608 over the number granted in 1944. This decline in issuance was owing in large degree to the greater volume of business imposed on the Office and a shortage of technical and other personnel.

Trade-marks registered in 1945 numbered 7,493. This was 57 above the total for 1944.

Net receipts of the Office in the fiscal year 1944 were \$3,905,789, an increase of \$342,172 compared with the preceding twelve months.

CASPER W. OOMS.

PENTAGON BUILDING. Nerve center of the War Department, the Pentagon Building and adjuncts cost over \$74,211,504, cover 320 acres, and housed more than 33,000 government workers in 1943.

The mile-around, five-story main building contains 16 and one-half miles of corridors and a cubic volume of 90,746,000 feet. It maintains 700 janitors and charwomen. Security is enforced by 325 civilian guards and military police.

In September, 1942, a private branch telephone exchange, large enough to handle the services of a city of 125,000 population, was placed in service. The exchange requires a staff of 300 and its 125 operative switchboard positions handled more than 200,000 in-coming and out-going calls daily.

The War Department estimated that the building would pay for itself in eight to fourteen years, on the basis of what the Government would have had to pay to rent an equivalent amount of Washington office space. The Pentagon, costing \$17.01 per square foot of usable office space, was built at a lower cost per square foot than any comparable public building in Washington.

The cafeteria, with a personnel of 750, served more than 50,000 meals daily. In addition to the cafeteria, the Pentagon contains a dispensary, bar-

ber shop, bank, post office, drug store, and shopping center.

PERMANENT CHARITY FUND. A Fund established in 1915 by the Boston Safe Deposit and Trust Company to furnish a medium through which money may be left in trust to charity. The principal of the Fund is invested and the income distributed to existing organizations, usually of Boston and vicinity. Payments to charities during the fiscal year ended June 30, 1945, totaled \$250,997 and capital assets on that date were \$5,947,811. President: Roger Preston. Secretary: Arthur G. Rotch. Offices: 100 Franklin Street, Boston, Mass.

PERMANENT JOINT BOARD ON DEFENSE—United States and Canada. A Board set up by President Roosevelt and Prime Minister W. L. Mackenzie King in pursuance of a joint communiqué dated Aug. 17, 1940, to "commence immediately studies relating to sea, land, and air problems including personnel and material" and "consider in the broad sense the defense of the north half of the Western Hemisphere." Chairman: U.S. Section, Fiorello H. LaGuardia; Canadian Section, Gen. Andrew B. McNaughton.

PERU. A republic of South America. Area: 482,258 square miles (1940). Population: 7,395,687 (1943). Capital: Lima.

The country is divided from west to east into three natural regions: the coastal area along the Pacific Ocean; the sierra, or central highland; and the montaña, a region east of the Andes including piedmont slopes and lowlands. The climate of the west coast is cloudy and cool; that of the highlands varies from very wet during the rainy season between October and April, to very dry; the montaña is excessively rainy and generally hot and humid. Temperatures vary according to exposure and altitude.

Government. Peru is a centralized republic of 22 departments, under its Constitution of 1933. It has a bi-cameral Congress: a Senate of 49 members, and a Chamber of Deputies of 152. The Congress meets annually on July 28 for regular sessions of 120 days. The President is assisted by a Cabinet of 11 ministers, and is elected for a 6-year term. Dr. José Luis Bustamante y Rivero was elected President on July 10, 1945, and took office on July 28.

The People. According to the census of 1940, 53 percent of the population of Peru is white and mestizo, and 46 percent Indian. Densities per square mile vary from 0.4 in the Department of Madre de Dios to 56.4 in the Department of Lima. The three largest cities are: Lima, 534,000; Callao, 84,000; and Arequipa, 79,000.

Spanish is the official language, but about half of the population speak Indian languages. The Roman Catholic religion is protected by the state.

The 1940 census showed 42 percent of the population to be literate; the highest proportion of literacy was reported from the coastal region, the lowest from the jungle area. In 1941 there were 99,325 students in 74 intermediate public schools; five universities had a total student body of 5,033. In 1945 primary school enrollment totaled 717,162. Four national high schools, 27 normal schools, and 35 advanced training centers for teachers have recently been established.

National Economy. Peru's economy is principally agricultural and pastoral, but mining and manufacturing contribute substantially to the national income. Peru is the second largest producer of cotton in Latin America, the 1944 crop reaching 67,114

metric tons. In addition to cotton, sugar is an important export crop, while wheat, rice, corn, barley, oats, and potatoes are grown for home consumption. Production of sugar in 1944 totaled 444,000 short tons; of rice, 916,305 bags of 100 kilograms each. The livestock industry provides most of the local demand for meat. There were about 14 million sheep and 2.3 million cattle in Peru according to the 1941 livestock census. Wool (sheep, alpaca, llama, and vicuña) is an important export product; some hides and skins are also exported. The chief forest products are rubber and cinchona.

The petroleum industry is one of the most important factors in the economic structure of Peru; petroleum and its derivatives account for about 30 percent of the total mineral output of the country. In 1944 crude petroleum production totaled 14,385,926 barrels. Copper, gold, lead and silver are next in importance. Peru is among the four principal silver-producing countries of the world, although silver production has declined during the past ten years because of increased mining costs and the use of lower grade ores. Total production in 1944 was 492,444 kilograms. Copper production in recent years has been about 37,000 metric tons per year; in 1940, 44,000 metric tons were produced, in 1943 output was estimated at 36,572 metric tons. Peru produces about one-half of the world output of vanadium, as well as coal and zinc. The total value of mineral production in 1944 reached 390,000,000 soles.

Peruvian manufacturing has developed considerably since 1929. Local industries now supply a large part of the home market for many types of consumer goods. The cotton textile industry is one of the most important manufacturing enterprises; other leading manufactures include woolen and leather goods, cement, chemicals, tobacco, glass, paper, foodstuffs, pharmaceuticals, and beverages.

Foreign Trade. The value of Peru's foreign trade in 1944 amounted to nearly 1,062,000,000 soles, an increase of about 17 percent over 1943. The value of imports increased 14 percent; that of exports 19 percent. Leading export items were: sugar, petroleum derivatives, copper, cotton, lead, mineral concentrates, wool, gold, flax, bismuth, elastic gums, silver articles, hides and skins, and fish. The United States took 36 percent of the total value of exports; Chile 24 percent; Bolivia 7; Great Britain 4. In 1944 exports of gasoline totaled 449,372 metric tons, fuel oil, 627,292 metric tons, kerosene, 91,221 metric tons; cotton exports amounted to 574,094 quintals; silverware, 13,698 kilograms, valued at 3,687,445 soles.

Leading imports in 1944 were: wheat, machinery, rice, butter, wood, iron and steel, piping, jute bags, trucks and chassis, fertilizers, tires, rails, automobile parts, petroleum lubricating oils, and agricultural tools. The United States supplied 54 percent of the total value of Peruvian imports, Argentina 18, Chile 5, and Australia 4 percent. In that year, Peruvian imports of pharmaceutical specialties were valued at 12,900,000 soles; tools (exclusive of Lend-Lease) at 12,300,000 soles; machinery and motor vehicles at 77,000,000 soles; iron, steel, and aluminum products at 31,500,000 soles; crude and processed metals at 15,300,000 soles; and stones, earthenware, including chinaware, glassware, cement, etc. (excluding Lend-Lease items) at 10,600,000 soles.

Events, 1945. Former President Oscar Benavides withdrew his candidacy for President of Peru in a letter published on Jan. 6 in the weekly *Jornada* of Lima. He urged the candidacy of a civilian for the presidential post to prevent a division within the

Army. "The armed institutions, which are the motherland's personification, cannot—must not—be divided," the former President declared. "Their division, a supposition which I reject, would mean national collapse. They are the only organized institutions existing in the country." The exiled Aprista faction headed by Manuel Seoane congratulated Benavides for his "patriotic manifesto" and asked permission to return to Peru from Chile to participate in the forthcoming election campaign.

On Mar. 16, General Eloy G. Ureta, former Inspector-General of the Army, officially announced his presidential candidacy and his platform. He sought "national unification, liberty and order," he declared. "... I am a man of the people ... without prejudice of class or party." *El Comercio* of Lima announced its support of Ureta, on the ground that a civilian candidate was not opportune because there were no traditional political parties in the country.

The presidential campaign was interrupted on Mar. 18, when a revolt plot was frustrated at the Ancon air base, 25 miles north of Lima. Two non-commissioned officers and a number of enlisted men who allegedly planned to seize Air Minister Fernando Melgar were arrested. Melgar quickly "reestablished discipline" and "complete tranquility." The official statement charged that the plotters had been in contact with the outlawed People's Party (former Alianza Popular Revolucionaria Americana, or APRA), which had attempted, "without success, to undermine the discipline of the armed forces."

Politics was resumed the following day, when the Frente Democratico Nacional, an anti-Administration coalition, launched the presidential candidacy of José Luis Bustamante y Rivero, Ambassador to Bolivia. Bustamante's platform urged separation of church and state, "constitutional and democratic readjustments, purging of political methods, administrative moralization, advances in social justice, and strengthening of Peru's international personality." In addition to the Frente Democratico Nacional, Bustamante was backed by the Apristas, Syndicalists, Socialists, and followers of Benavides, who personally endorsed Bustamante.

On Apr. 8 the Interior Ministry reminded political groups, as their activity increased, of legal restrictions on campaign demonstrations. Meetings must be held only in approved public places, the statement warned, and parades and other forms of "collective transit" of demonstrators were prohibited. Exiles of both the left and right returned to Peru with the Government's permission. The National Election Board ruled on May 18 that the People's Party would be permitted to participate in the elections.

The influential Lima daily, *La Prensa*, withdrew its support from Ureta in May because it was dissatisfied with the congressional candidates running on his ticket, and on May 19 the conservative Union Revolucionaria party took the same step, asserting that his campaign, backed by the Prado Administration, was designed "to maintain in power the same men, with the same methods."

All campaigning ended on June 8, according to law, and the election for President, two Vice Presidents, 49 Senators and 152 Deputies was held on June 10. President Manuel Prado had promised that the vote would be "free, impartial, and democratic," and that the Government would act with "absolute impartiality and without discrimination of persons or political parties," and he was as good as his word. No disorders or irregularities were reported and an estimated 750,000 voters went to the polls.

Bustamante assumed an immediate lead as the vote-counting started, and on July 21 the National Election Board officially proclaimed him President-elect, with 305,590 votes against 150,720 cast for Ureta. The Senate's 49 seats were apportioned among 21 Apristas, 12 National Democratic Front candidates, 6 independents, 3 "Pradistas," and 4 Socialists, returns on 3 seats being annulled. The 153 seats in the Chamber of Deputies were distributed among 46 Apristas, 10 National Democratic Front candidates, 55 independents, 28 Pradistas, and 2 Socialists, with 12 annulments.

The new President was inaugurated on July 28. Although the Apristas pledged their support, and the Cabinet was drawn up in consultation with Aprista leader Victor Raúl Haya de la Torre, no members of that party took Cabinet posts.

The new Congress assembled on the same day. Among its first acts were abolition of the 1936 "emergency laws," which had restricted political activity and the press; termination of the 25-year-old censorship on incoming and outgoing news, and a general amnesty for all political prisoners, together with an invitation to remaining exiles to return to Peru.

"There will be no dictatorship or extremism," Bustamante declared in his inaugural address. His administration would "seek real solutions and will attempt to create methods to face" postwar problems. The new administration, in a drive to curb unnecessary expenditures, ordered the termination of secret appropriations and subventions for political purposes. The Agriculture Ministry on Aug. 9 ordered strict compliance with a standing law which requires that 40 percent of all farm land be devoted to production of food. The Ministry of the Interior decreed suppression of the Social and Political Brigades of the police force, described by leftists as a "Peruvian Gestapo."

Public attention turned in September from the legislative halls in Lima to the city of Cuzco, where there was an open break between Communists and Apristas. Some 250 Communists attempted to seize a hall in which Haya de la Torre was scheduled to speak, and Communist workers demonstrated against him in the streets because of alleged anti-labor remarks in an earlier speech. Police and troops intervened and several persons were reported seriously wounded. The Cuzco labor federation thereupon called a strike.

Hostility between Apristas on the one hand and Communists and Socialists on the other spread to Congress. And 40 re-elected and independent Congressmen formed a "parliamentary union" to oppose the administration's Aprista-National Democratic Front legislative program.

The entire Cabinet went out on Oct. 4 in sympathy with Finance and Commerce Minister Romulo Ferrero who resigned after his report on government political and economic measures had been severely criticized in the Senate. A reorganized Cabinet was named on Oct. 7.

On Oct. 30 President Bustamante broadcast his first message to the Peruvian people. He reviewed the opening three months of his Administration and pledged solution of the country's two greatest problems: improvement of living conditions and stabilization of finances. Promising action to reduce price levels and to construct low-cost housing, he predicted that within a few years oil would prove an important source of national income. Plans for electrification and increased manufacturing were outlined. "Peru is passing through a temporary depression," the President said, but "the commercial situation is becoming daily more favorable, espe-

cially in the matter of sugar and silver exports." Investment of foreign capital was increasing and commercial credit was being established abroad. He declared that his Cabinet was non-political and that he regarded himself as a "centrist mandatory seeking coordination and good understanding" with Congress.

A new press law, backed by the administration and designed to prevent abuse of the newly-granted freedom of the press, was passed by the Senate on Nov. 15. The law: (1) empowered the Supreme Court to close down any newspaper guilty of violating civil liberties; (2) provided that newspaper publishing companies must issue registered shares only, and that those having bearer shares outstanding must convert them into registered shares within 60 days; (3) directed publishers to furnish complete data on capitalization, ownership, and loans or mortgages outstanding, and to publish a complete list of owners and shareholders once a year.

Supporters of the bill argued that these provisions were a safeguard against the danger that enemies of democracy might shield themselves behind newspaper anonymity. The large conservative newspapers of Lima, such as *La Prensa* and *El Comercio*, led the fight against the bill, declaring that freedom of the press cannot be regulated by law. When a group calling itself the Committee for Defense of Freedom of the Press held a public meeting on Nov. 19, Apristas interrupted the speakers and a riot followed. The bill was passed by the Chamber of Deputies on Nov. 23.

On Nov. 29 the Apristas held a great public demonstration against the "reactionary press," which continued to attack the new press law. On Dec. 7 the President declared that the debate on the press law, which he had not yet signed, had taken on a passionate political bias which menaced the integrity of the administration coalition. That same night opponents of the bill, supported by Socialists, Communists and other disaffected members of the coalition, held a counter-demonstration to that of the Apristas. Two were killed and at least 26 injured when the demonstrators clashed with Apristas. The Apristas reportedly set fire to the headquarters of the extreme rightist Revolutionary Action Party, and two buildings were burned. Congress by a vote of 158 to 3 on Dec. 13 registered confidence in Interior Minister Rafael Belaunde and the Cabinet, after Belaunde had made an extensive explanation of responsibility for the riot, which he blamed on the organizers of the original demonstration against the press law. The President signed the law after Congress had deleted its most controversial provision, which would have empowered the Supreme Court to close any paper which violated "civil liberties."

Finance Minister Carlos Montero Bernal returned to Lima late in December after a visit to the United States during which he negotiated a debt-servicing agreement and a \$30,000,000 Export-Import Bank credit extension.

HARRY B. MURKLAND.

PETROLEUM ADMINISTRATION FOR WAR (PAW). Created May 28, 1941, by President Roosevelt in a letter to Secretary of the Interior Harold L. Ickes, naming him Petroleum Coordinator for National Defense. Mr. Ickes appointed Ralph K. Davies, of California, Deputy Petroleum Coordinator. On Dec. 2, 1942, the office of Petroleum Coordinator for National Defense was redesignated Petroleum Administration for War, with Mr. Ickes as Administrator and Mr. Davies Deputy Administrator. See 1943 and 1944 Year Books for authority and duties

of Administrator and 1945 Year Book for outline of organization.

The function of PAW was to assure adequate supplies of petroleum and petroleum products for military and essential civilian needs of the United States, and in cooperation with appropriate agencies of other governments perform the same function for the United Nations. Through an effective partnership with the petroleum industry, organized under the Petroleum Industry War Council headed by William R. Boyd, Jr., the Foreign Operations Committee, and numerous district committees and subcommittees, the PAW mobilized the oil resources of non-Axis powers for most efficient use in the war program.

The personnel of PIWC, its various committees and subcommittees serving without pay, reached several thousand during the war period, but PAW operated with 1,483 employees at the peak in 1944. It is now in process of liquidation, having rescinded most of the wartime restrictions and cut personnel to 100 as of January 1. The agency is expected to be entirely liquidated by June 30, 1946, the end of the current fiscal year.

From the time the agency was established in 1941 until about V-J Day, crude production of the United States rose from 3,772,000 barrels a day to 4,940,000 barrels a day and in the foreign supply available to the United Nations, exclusive of the U.S.S.R., from 1,600,000 barrels a day to 1,850,000 barrels a day. Aviation gasoline production of the United Nations rose from 80,000 barrels a day at Pearl Harbor to 600,000 barrels a day, of which the United States was producing more than 525,000 barrels a day, on V-J Day. Since PAW took over the aviation gasoline program five months before Pearl Harbor, more than 360,000,000 barrels were produced up to the end of the war. Total crude production for the United Nations, exclusive of the U.S.S.R., during the war period was approximately 7,500,000,000 barrels.

HAROLD L. ICKES.

PETROLEUM CONSERVATION DIVISION. A Division of the U.S. Department of the Interior, established in 1936 to assist the Secretary of the Interior in administering the Connally law, which prohibits the shipment in interstate and foreign commerce of petroleum or its products produced in excess of the amount permitted by State law. The Division acts as the contact agency with the Interstate Oil Compact Commission, and also supervises operations of the Federal Petroleum Board. Acting Director: Edward B. Swanson.

PHILANTHROPY. A new record of American philanthropy was indicated in the annual report of The John Price Jones Corporation. This study showed that in eight of the nation's largest cities publicly announced gifts in 1945 totalled \$191,134,648, an increase of 18.57 percent of the \$161,198,206 contributed in the same cities during 1945.

Publicly announced bequests for 1945 in these cities—New York, Chicago, Philadelphia, St. Louis, Los Angeles, Boston, Baltimore and Washington, D.C.—totalled \$18,171,649 compared with \$34,677,696 in 1943, a decline of 47.6 percent. This decrease does not necessarily indicate a downward trend since it is likely that many wills of wealthy persons may not have been offered for probate during 1945.

According to the study, \$121,522,582 in these eight cities was given to organizations connected with the war effort, such as the Red Cross and the National War Fund. Educational institutions re-

ceived \$21,281,790, with several gifts of \$1,000,000 and more; organized social work agencies received \$21,514,465; and health agencies and hospitals received \$15,480,938.

As in the past, New Yorkers gave the greatest amount, \$91,569,332, followed by Chicago, \$23,352,485; Philadelphia, \$19,186,213; Los Angeles, \$15,704,580; Boston, \$13,568,268; Baltimore, \$9,923,366; Washington, D.C., \$8,864,391; and St. Louis, \$8,776,013.

PHILIPPINE ISLANDS. A group of islands in the Western Pacific Ocean, ceded to the United States by Spain on April 11, 1899, conquered by Japanese armed forces in 1942, and liberated in February 1945. The Tydings-McDuffie Act of March 24, 1934, created the Philippines an autonomous commonwealth, and provided for them to become fully independent on July 4, 1946.

Area. The combined area is 114,400 square miles. This comprises 7,083 islands, of which only 466 cover as much as one square mile apiece. Two islands, Luzon (40,814 square miles) and Mindanao (36,906 square miles) account for more than two-thirds of the whole area. Others, with their respective areas in square miles, are Samar, 5,124; Negros, 4,903; Palawan, 4,500; Panay, 4,448; Mindoro, 3,794; Leyte, 2,799; Cebu, 1,695; Bohol, 1,534; and Masbate, 1,255.

Government. Under the Tydings-McDuffie Act of 1934, a Philippine constitutional convention drew up a Constitution which was approved by popular vote and went into effect Nov. 15, 1935. It vested wide executive powers in a President elected by popular suffrage for six years and legislative authority in a one-chamber National Assembly of 98 members elected for three years. Constitutional amendments adopted in 1940 reduced the Presidential term to four years; revoked the former clause barring reelection of a President (but two successive terms only were permitted); established a bicameral Congress, with Senators elected at large, in place of the National Assembly; and established an independent electoral commission to supervise elections.

Events, 1945. In January, Gen. Douglas MacArthur caught the Japanese napping with unopposed landings on the southern and southeastern shores of Lingayen Gulf. U.S. troops of the Sixth Army supported by the Seventh Naval Fleet, with 1,033 ships and 273,000 men, and the land-based bombers of the Far Eastern Air Force, established four beachheads, with one beachhead located 100 miles north of Manila. During February all efforts were concentrated on the drive for the liberation of Manila. It was in the midst of these concerted attacks that the "angels of Bataan and Corregidor," the American Army nurses, who cared for the wounded, were liberated from an internment camp. Rangers liberated 513 survivors of the Bataan march at Cabanatuan while the First Cavalry liberated 3,700 internees at Santo Tomas.

Within 26 days after the initial landings at Lingayen Gulf, Manila was liberated from Japanese tyranny and oppression by troops of the Sixth and Eighth Armies, the Thirty-Seventh Division of the National Guard, the Eleventh Airborne Division, the First Cavalry, and the soldiers of the Philippine Commonwealth. The fall of Manila was formally announced Feb. 6, at 6:30 A.M. Manila was ravaged by fire and shell and few if any buildings were standing after the Japanese were driven out. The Cavite naval base, Corregidor, and Bataan fell shortly thereafter.

In the midst of the mop-up campaign General

MacArthur restored civil government in the Philippines and turned over the government to President Sergio Osmena in an impressive ceremony that was held Feb. 27 at Malacan Palace, the Manila White House. President Osmena pledged his administration to close collaboration with the United States and to the principles of freedom and democracy. President Truman stated that he was in favor of early independence and that he endorsed the Philippine policies of the late President F. D. Roosevelt.

The restoration of civilian government brought to the fore the question of free trade and preferential treatment without which Philippine industry could not meet foreign competition in the American market. United States tariff barriers against Philippine products would disrupt the whole Philippine economy because 83 percent of its exports and 78 percent of its imports involve the United States.

Sen. Millard Tydings (D), Chairman of the U.S. Senate Committee on Territories and Insular Affairs and the Filipino Rehabilitation Commission, was directed by President Truman to conduct a survey of the islands as his special envoy. The Senator visited the islands in May but cut his trip short to make a report on conditions which "were beyond description." The extent of the devastation and destruction, the lack of shelter, the millions in need of food and medical supplies, all amazed him. Upon his return he called for an outright appropriation of \$100,000,000 for rehabilitation purposes, an immediate large-scale public purposes loan, and Federal aid for reconstruction work.

The total amount of war damage inflicted on private business and individual property and public buildings between Dec. 7, 1941, and May, 1945, was estimated at \$800,000,000 to \$1,000,000,000. Only property destroyed up to July 1, 1942, was insured by the War Damage Corporation. Bills were introduced in the U.S. Senate providing for the payment of all war damages, but no action was taken during 1945.

The first session of the Philippine Congress, June 9, consisted of members who had been elected on Nov. 19, 1941. Of the 98 House members, 70 were present, 11 dead, and 17 under detention. Of the 24 Senate members, 13 were present, 2 dead, and 9 under detention. Since the terms of all House members and two-thirds of all Senate members were to expire Dec. 30, 1945, President Truman asked Congress to authorize a general election for national offices not later than Apr. 30, 1946, and that those elected take office not later than May 28, 1946.

Paul V. McNutt was appointed U.S. High Commissioner to the Philippines by President Truman. Assisting him as Chief of Staff was Maj. Gen. William F. Rose; Economic Advisor, E. D. Hester; and Legal Advisor, Capt. Myron C. Erlich. The first task assigned by President Truman was the disbandment of the guerrilla army. The progress of economic rehabilitation and the return of the islands' industries to commercial production also was to be studied.

Population. The population was estimated at 16,771,900 on Jan. 1, 1941. The city of Manila had (1939) 623,362 inhabitants. In 1937 the Commonwealth enacted legislation making Tagalog one of the official languages, effective in 1946. One out of eight persons had some knowledge of English, and one out of sixteen, of Spanish. The Roman Catholic Church had the greatest following on the islands.

Education. The literacy rate was 48.8 percent at

the time of the 1939 census. In March, 1940, the public school system included 12,057 schools, 43,763 teachers and administrators, and 1,940,729 pupils. In addition there were 439 private schools with 149,491 students.

Economy. Agriculture was the main support of the islands before the war, followed by mining and manufacturing. Sugar and rice are the most important agricultural export products. Copra was next, followed by abaca, tobacco, and forest products. The most important mineral products are gold, iron, chrome, manganese and copper. Cotton embroideries were the most important manufacture.

CHARLES F. REID.

PHILOSOPHY. Owing to circumstances connected with the war, the output of philosophical books was restricted this year, and very few important ones appeared. A ruling of the ODT also dissuaded the American Philosophical Association from holding its annual meetings in the East, the West, and the Pacific Coast. On the other hand, the periodical literature, though some journals here and in England were reduced in size, appeared as before.

Bertrand Russell's *A History of Western Philosophy and its Connection with Political and Social Circumstances from the Earliest Times to the Present Day*, which appeared this year, is unique in a number of respects. The author, whose contribution has been in the field of logical analysis, has never made a special study of any philosopher of the past except Leibnitz. He has produced something new and stimulating, however, by supplying the social and political context, missing in almost all histories of philosophy, by including such philosophers as Rousseau and Marx, who are not usually discussed, and by exercising his caustic wit and critical talent at the expense of practically everyone. Although designed more for the educated public than for professional philosophers, the latter will also find it profitable. For example, Russell answers Parmenides' paradox that "thinking about nothing is the same as not thinking" in terms of his own theory of descriptions, made famous by its use in *Principia Mathematica*. The assertion that "Hamlet was Prince of Denmark," which is an assertion about nothing, i.e. a non-existent, is true only if construed as: "Shakespeare says that there was a Prince of Denmark called 'Hamlet'". In the same way all statements about unicorns or other fabulous animals are really about the word "unicorn," or other such words (p. 50). Similarly, in criticizing Plato's argument in the *Theaetetus*, Russell makes use of his theory that classes, and hence numbers, are logical fictions. Numbers are not properties of things but of concepts. It is thus a mistake to say that "the moon is one." We should say: "There is a *c* such that '*x* is a satellite of the earth' is true when, and only when, *x* is *c*'" (p. 157). This is familiar to logicians but novel in a general history of philosophy. Russell's treatment of Aristotle's metaphysics, his doctrine of form and matter, universals, essence and so on will seem to many readers extremely cavalier. The problem of universals (p. 164) like the problem of essence (p. 120) is merely a confusion about the use of words. On the other hand, the criticism of Aristotle's logic and physics in the light of modern science is instructive and valuable. A great deal of general history is wisely included in the medieval section of the book, and medieval philosophy is judged not only according to norms of modern science and "liberalism" but also in relation to the limitations of the 11th, 12th, and 13th

centuries. The treatment of the moderns is often arbitrary. In the nineteenth century only a few philosophers are considered, and the book ends with a brief account of John Dewey and several pages on "The Philosophy of Logical Analysis," which represents Russell's ideal. Most interesting, at the end, is Russell's appraisal of Dewey. He agrees with the common verdict that Dewey is the greatest of American philosophers. "The main difference between Dewey and myself," Russell says, "is that he judges a belief by its effects, whereas I judge it by its causes where a past occurrence is concerned." (p. 826). Russell says that nothing we do in the future can change the fact that "Caesar crossed the Rubicon." For him a judgment is true if it *corresponds* with the past event, whereas for Dewey we are *warranted in asserting* it if this has certain satisfactory results.

Another important historical work is Ralph Barton Perry's *Puritanism and Democracy*, which attempts to salvage the truth of puritanism and to show its consistency and continuity with developing American democracy. The link which joins puritanism and democracy is individualism, that is, the metaphysical esteem for the individual as the only reality that counts. Perry's individualism does not exclude collectivism or planning, though the plan must somehow take account of the claims of "any" individual. Puritanism is said to resemble democracy in recognizing equality before God, in rejecting an intermediary, and in hating all tyrants. A related phase of American thought is treated by Richard Hofstadter in *Social Darwinism in American Thought*. The impact of various concepts of Darwinism is traced. There is the struggle-for-existence individualism propagated by Spencer, and usually called "social Darwinism," which was warmly received in American business circles, but there is also a kind of collectivism which stems from Darwin. Both are to be distinguished from the biological import of Darwin's work. Whereas Hofstadter makes distinctions, William S. Quillian, Jr., in *The Moral Therapy of Evolutionary Naturalism*, rejects the entire conception of evolutionary ethics in favor of a religious normative ethics. Another important, if belated, contribution to the history of philosophy is Jeremy Bentham's *The Limits of Jurisprudence Defined. Being Part Two of an Introduction to the Principles of Morals and Legislation*. This book which is now first printed from the author's manuscript, does not attempt to elaborate the complete and ideal set of laws that Bentham dreamed of, but only to lay the foundations for it.

A number of articles have appeared on the theory of history. Morton C. White in "The Attack on the Historical Method" (*Journal of Philosophy*, vol. xlii, no. 12) maintains that the historical explanation upheld by the historicist is not mere chronicle, but "dynamic generalization," i.e., history facilitates predictions of later from earlier stages. The author gives an example from the historian, Henri Pirenne: "Every class of capitalists is at the beginning animated by a clearly progressive and innovating spirit but becomes conservative as its activities become regulated." In another interesting article, "Generality and Singularity" (*Journal of Philosophy*, vol. xlii, no. 3), Albert Hofstadter argues that historical preoccupation with singularity is not incompatible with laws. "The differences between universal and singular judgments are mainly functional. Hence generality of law and singularity of reference are perfectly compatible."

In the field of social philosophy we have Bene-

detto Croce's *Politics and Morals*. The eminent Italian philosopher takes the paradoxical view that in every state, despotic or liberal, "authority and liberty are inseparable" (p. 14) and we emphasize one or the other according to the taste of the times. Authority presupposes liberty because "it is only to be found with respect to what is alive, and only what is free is alive" (p. 111). In spite of this, Croce has a decided preference for liberalism as a way of life and as a political form, and defines it in sharp contrast to theocracy, both Catholic and socialist. The promised paradise, whether Catholic or socialist, must be imposed ready made. The spontaneity and diversity of individuality in the name of equality, or equality before God, is thus stifled in either case. To such a negation of "struggle and of history" liberalism is steadfastly opposed. Indeed, it is so much opposed that Croce seems to agree with Gladstone that liberty "is the means of creating and promoting aristocracy, not democracy." Aristocracy, Croce adds, "is truly vigorous and serious when it is not a closed but an open aristocracy, firm in keeping the common people away, but always ready to welcome those who have elevated themselves to its level" (pp. 118-19).

Whereas Croce attempts to determine what is right and good, Charles L. Stevenson (*Ethics and Language*), represents a different type of ethical writing, which is concerned only to clarify the meaning of such terms as "right" and "good." The book is a sequence of linguistic distinctions and clarifications designed as an aid to ethics proper, i.e. normative ethics. For example, ethics involves agreement and disagreement. What is meant by these terms? Stevenson distinguishes between agreement in belief and agreement in attitude, and insists that the distinction holds even when the beliefs are about attitudes. It is also important to distinguish between disagreement in belief about attitudes and disagreement in attitudes. Obviously these different kinds of agreement and disagreement are all involved in ethical situations, but in different ways. The type of tentative conclusion which the author's cautious method permits is illustrated by his discussion of the exceedingly important question of the validity of ethical judgments. The validity of ethical judgments may not be parallel to the validity of judgments in inductive and deductive logic because attitudes are involved in the former case. Nevertheless there is a sense, Stevenson says, "in which 'That is true' signifies agreement not in belief but in attitude. Although not found in science, this sense is useful in ethics. . . . It may accordingly seem feasible to recognize a corresponding sense of 'valid,' in which a reason, if true in the ordinary sense, may validly establish an ethical judgment as true in this special sense" (p. 173). The author's difficulty in giving a meaning to validity in ethics arises from the sharpness of the contrast he draws between verification procedures in science and ethics.

Present-day literature bears witness to the growing recognition of Marxian philosophy. Vernon Venable (*Human Nature: the Marxian View*) has attempted a systematic exposition of the Marxian theory of human nature from scattered and partly untranslated sources. The aim is faithful delineation, not special interpretation. In contrast to Venable, who makes no reference to critics or interpreters of Marx, Harry Slochower (*No Voice is Wholly Lost: Writers and Thinkers in War and Peace*) discusses a whole assemblage of modern writers, mostly literary men, and traces their waverings and insights, their approach to

Marxian conceptions or their retreat in some cases, to mystical absolutes. On the basis of early writings of Marx, the author maintains that, in the Marxian view, permanence is as important as change, and essential to it. Thus scientific laws may remain permanently valid and literature, permanently valuable, throughout the historical process.

In current contrast to the Marxian view of history is "psychodynamics," or explanation of history in terms of basic personality structure. Abram Kardiner (*The Psychological Frontiers of Society* p. 414) lists four disciplines which have contributed to the interpretation of historical data in the 20th century: the theory of evolution, the social theories of Marx, cultural anthropology and psychodynamics. Kardiner makes use of the last in a program of research and theoretical construction which is announced and exemplified in the above book. Jerome Frank (*Fate and Freedom*) employs the third method of interpretation, i. e. cultural anthropology. Opposing all supposed laws of history, particularly the Marxian, Frank insists that science gives no warrant for determinism, that men are free to make their own history, or as James said, to make their ideas true. In a final chapter, "Towards a New Synthesis," he urges religions to compound their differences in a common practical program, and he praises an inclination to pragmatism which he finds even within the Catholic Church. Erich Frank (*Philosophical Understanding and Religious Truth*) is mainly concerned with a vindication of religion. Its truth and relevance emerge, he says, whenever man is faced with "the inevitability of death, of suffering, of struggle, and of guilt." The task of the philosopher is to grasp the essence of religion, its eternal revelation, and to separate this from the historical accidents. The philosopher must recognize "his own philosophizing as a mere simile . . . a symbol, a cipher of the absolute." Then he will not be "tempted again to replace the concepts of religion by his own rational ideas" (p. 164) for he will realize that there is a higher truth which he can never attain. Freedom, like reason, is limited by necessity which is, ultimately, divine necessity. *The Authoritarian Attempt to Capture Education*, consisting of papers from the second conference on the Scientific Spirit and Democratic Faith, defines freedom as exemption from restrictions. John Dewey, Sidney Hook, Arthur E. Murphy and other contributors, in brief papers, discuss standards of freedom in politics, education, communications, etc.

In the field of logic an interesting development was the appearance of a series of articles (*Journal of Philosophy*, Jan. 4, Feb. 18, April 26) by John Dewey and Arthur F. Bentley. These authors make a vigorous attack on "a certain vagueness in logic," as exemplified in works of leading contemporary logicians. In "search for firm names" and a better "terminology for knowings and knows," they would jettison all metaphysics and adopt operational definitions.

One of the most significant events of the year was the appearance of "A Symposium on Probability, Part I" (*Philosophy and Phenomenological Research*, vol. 5, no. 4). The first article, "Derivation of Probabilities from Frequencies," by Donald Williams, is a forthright and vigorous attack on the so-called frequency theory of probability, which the other symposiasts stoutly defend. Williams argues that the classic Laplacean formula that the probability of an event is the ratio of the favorable cases to all the possible

cases, favorable and unfavorable, is still "the most general rule for the derivation of probabilities from frequencies." The frequency theory, however, and for very inadequate reasons, according to Williams, insists upon imposing restrictions on the general Laplacean formula. Probability can only be determined, it claims, by the limit of the ratio of favorable and possible cases in an infinite series of trials characterized by randomness or convergence (a "collective").

Although spokesmen for the frequency theory exult in their empiricism, they are soon forced to admit, says Williams, that "an infinite random sequence" is not an empirical fact but a Platonic idealization, that infinite collections hardly ever enter into a probability estimate, except to facilitate statistical calculations, and that "random" cannot even be defined. The bearing of frequency theory upon induction is especially unsatisfactory, since this theory precludes the attribution of a probability to any induction. The frequentists are in a hopeless situation: "Since . . . we cannot know a probability until we know a collective, but cannot know a collective except with probability, the theory debars us forever and *a priori* from knowing any probability whatever." Frequentists such as Venn, Mises, Reichenbach, Nagel and others, Williams shows, frankly admit the skeptical outcome of their theory, and offer no remedy except pragmatic conventions possessing only anthropological warrant. It is this Humean skepticism Williams wishes to avoid by disproving the frequentist's claim that "probabilities can be generated *only* by collectives."

Nagel in the next article of the symposium, "Probability and Non-demonstrative Inference," rejects Williams' criticisms of the frequency theory. If they were correct a great deal of well established physical theory would be invalidated. It is true, he admits, that if probability is defined as a limit, direct empirical confirmation apparently becomes impossible. But the same is true of important theories of natural science which are committed to the use of real numbers. Real numbers are also defined as the limits of infinite sequences. If the frequency theory is unempirical, as Williams claims, so also are those important parts of natural science which employ limits. The frequency theory does not consist of untestable statements, even though pragmatic rules, which the theory does not specify, must be used in applying it to specific cases. Once such pragmatic rules are decided upon, and any theory must employ them, frequency statements can be tested. On other matters Nagel meets Williams half way. He concedes that there is a non-frequency sense of probability, and that when a probability is assigned to a single event it is not always possible to interpret this probability in terms of relative frequency.

The Achilles' Heel of the Laplacean theory is the so-called principle of indifference, which states that when nothing is known concerning two alternatives, or the evidence for them is equal, they are equally probable. This leads to well known paradoxes. Williams does not attempt to defend the principle, but alleges that it is as essential to frequency theory as to his own Laplacean theory, a contention which is rejected by all the other symposiasts—Hans Reichenbach, Rudolf Carnap and Nagel. It will probably be conceded that Williams' defense of Laplace's theory was much less successful than his polemic against the frequency theory. This conclusion becomes even clearer in the second installment of the *Symposium*

which contains papers by Henry Margenau, Gustav Bergmann, R. V. Mises, Felix Kaufmann, and a reply by Williams.

C. W. Churchman in a series of articles on "Probability Theory" (*Philosophy of Science*, vol. 12, no. 3) presents six postulates for experimental method, the last of which is distinctive and interesting. The sixth postulate states: "It is necessary to set up a one-one correspondence between the theoretical elements of the formal theory and the observed points, so that the resulting 'image' of nature provides an adjustment of observations that have been made to any degree of precision." The image of nature is required by experimental method, but it is only permissible "if its principle of adjustment of observations leaves the adjusted observations in control."

Pursuing a similar topic, Carl G. Hempel and Paul Oppenheim ("A Definition of 'Degree of Confirmation,'" *Philosophy of Science*, vol. 12, no. 2) define "degree of confirmation" with the help of R. A. Fisher's principle of "maximum likelihood." The definition reads: $dc(H, E) = pr(H, E, \Delta_r)$, which means roughly that the degree of confirmation of the hypothesis H on the given evidence E is equal to the probability which can be assigned to H after inferring the frequency distribution Δ_r from E . One merit claimed for this definition is that the formal structure of the two sentences H and E is alone sufficient to determine $dc(H, E)$.

One of the above writers, Carl G. Hempel, has also worked out a definition of confirmation ("Studies in the Logic of Confirmation I and II," *Mind*, Vol. LIV, N. S., no. 213 and 214,) employing the notion of the "development" of a hypothesis. The development of the hypothesis that every object has property P or Q , for a finite class consisting (say) of a and b , is a has property P , or Q , and b has property P , or Q . The definition of "direct confirmation" is then: "An observation report B directly confirms a hypothesis H if B entails the development of H for the class of those objects which are mentioned in B ." Confirmation is then defined in terms of direct confirmation. The advantage of this and other definitions offered in these articles, is that they are formulated purely in logical terms, and that the meanings assigned approximate to those employed by science.

V. JERAULD MCGILL.

PHOTOGRAPHIC PROGRESS. The year of victory for the United Nations in the second World War can be divided into two periods. In the first part extending from January through August every effort was being made on the home and the fighting fronts to bring the war to an end. In this drive photography played an important part. During the remaining months comprising the second period, a great inventory and reconversion program was in progress, to catalog the happenings of the war and to supply needed materials for peacetime use.

Photography During the Closing Months of the War. It is difficult at this time to appraise accurately the full value of photography in the war. It was used in so many ways both old and new, and the quantity of equipment, chemicals, and film used so far exceeded normal consumption, that no true picture can be made until all facts are compiled. Probably the best estimate of its usefulness is given by General Marshall's biennial report which appeared in October. It pointed out that the major part of all intelligence data about the enemy was obtained from aerial reconnaissance

photographs. Millions of such photographs were required for each major operation. The plan by the Air Corps to knock out the German synthetic oil plants, aircraft factories, and other strategic points was guided and assessed by photography. The grand strategy of the American, British, and Russian armies, in the final drive to crush German resistance by dividing and isolating its armies, was recorded in detail by cameramen on the ground and from the air. The camera photographed the historic junction of the Russian and American armies near Torgau on the Elbe River on April 25. When the final surrender came in May the signing of the surrender papers was documented by photography; at Luneburg on May 4, at Reims on May 7, and in Berlin on May 8. Then followed the arrest of the leaders, and photographic evidence of their criminal brutality was obtained. Introduction of this evidence assisted in the conviction of many of these individuals during their trials in the fall. Captured German motion pictures were also expected to be introduced as prosecution evidence in some of these trials.

A much similar account was told about the war in the Pacific. Photographic reconnaissance guided the campaign for the release of the Philippines and the invasions of Iwo Jima and Okinawa. A photograph of the raising of the American flag on Mt. Suribachi, on Iwo Jima, taken by Rosenthal of the Associated Press was generally recognized as one of the outstanding pictures of the war. Some of the most amazing motion pictures of the war were made of "kamikaze" attacks on the fleet off Okinawa. Finally in August came the epochal atomic bombing of Hiroshima and Nagasaki. The photographs of these world-shaking events and of the test of the first bomb on July 16 in New Mexico provide valuable records for future study. For this important work 55 cameras were used (mostly motion

picture) with settings varying from $\frac{1}{11,500}$ second at f 32 with density 2 neutral filter, to 2 seconds at f 2, and located at distances from half a mile to 20 miles (*U.S. Camera* 8: 26, Nov., 1945). When the surrender documents were signed on the battleship Missouri on Sept. 2, all phases of this important event were photographed. Again the pattern was repeated as the cameramen recorded the arrest of military and civil leaders, and photographic evidence of treatment of prisoners came from confiscated Japanese films. Through the medium of the newsreel, much of the realism of these events was shared with the people at home.

As the war drew to its close and as a result of partial lifting of military security, information was released concerning such secret devices as radar and rockets (*Life* 18: 26, June 25, 1945; *ibid* 19: 96, August 20, 1945). Radar sends out powerful high-frequency waves and then receives and times the echo from any object in their path; the information usually being recorded as an image on the glowing screen of an oscilloscope much like the screen used in television. The radar "scope" can be photographed and the image then is available for future study. The June issue of the U. S. Army Air Forces magazine, *Impact*, contained the first radar scope photographs to be released publicly. They showed the coast of Normandy before and during the invasion of June 6, 1944, as it appeared on the radar screen in a plane flying above thick clouds. To make such pictures, automatic recording cameras as well as manually operated ones were used.

Much useful data on the flight characteristics of rockets was said to have been obtained from photographs of them taken with high speed cameras. One of these, the ribbon frame camera, was described by Reck (*Bell Laboratories Record* 23: 40 February 1945). The shutter mechanism consists of two concentric drums rotated at slightly different speeds in the same direction. The outer drum turns 24 times per second and has five transverse slots and the inner drum turns 30 times per second and has four slots. The film (a standard No. 122 size) moves continuously behind a slit, 0.15 inch wide, outside the two rotating drums. Exposure times are adjustable from 0.0001 to 0.0006 second, the pictures appearing as narrow "ribbons" across the width of the film, 200 pictures per roll of film.

The Air Technical Service Command in a paper read at the fall meeting of the Society of Motion Picture Engineers in New York supplied further data on high speed photography. Motion pictures of the take-off of a V-1 type rocket bomb, ignition of hydraulic fluids when a fuel line was hit by incendiary bullets, methods of decreasing wear on the tires of a B-29 plane by tire rotation before landing, and the cause of improper firing of machine guns, were some of the subjects discussed.

Propeller efficiency was investigated by photographing airplanes through a wire grid while they were moving on the runway. The pictures were made at a rate of four per second using the grid five feet in front of the camera. Graphs were drawn from the projected motion picture (*Aeronautical Eng.* 4: 159 May, 1945).

The effects of gunfire on armor plate was studied with an electronic sequence timer permitting six microflash lamps to be fired simultaneously or at intervals of 0.6 to 0.0003 second apart (*Phot. Trade News* 9: 39 May, 1945).

Additional fine examples of aerial photography at night were released by the AAF and the RAF for publication. It was also revealed that an Edgerton type gaseous discharge photoflash lamp had been used by the U. S. Army Air Forces for some of this work. Much of the daytime aerial photography was done at altitudes of 35,000 feet or more with automatic cameras fitted with long focus lenses of 24-inch, 40-inch or 60-inch focal length. Haze filters were used to reveal ground detail clearly. A lens of 48-inch focal length was announced by the Eastman Kodak Company in May for use on an aerial camera making 9 by 18-inch pictures. Distortion of the lens from shrinkage in the cold, rare air of the high altitudes was prevented by a thermostatically-controlled electrical heater (*New York Times* 94: 95, May 5, 1945). Some aerial photography was done from high speed planes at very low altitudes, for example over 200-miles per hour at 200 feet above the ground. Although most photographic planes were not equipped with armament protection, it was reported in August that a photo version of the B-29 Superfortress was used over Japan. It was called the F-13-A and was equipped with six cameras. It retained the firepower of the B-29 but carried a lighter bombload (*Skyways* 4: 10, August, 1945). The history of air camera design and the modern requirements of aerial cameras were discussed by Williamson (*Phot. J. (London)* 85B: 50 May-June, 1945).

Throughout the war microfilm was used for many purposes when a saving of space of records, blueprints, documents, and so on was necessary. The original material was copied on 16-mm. or 35-mm. film which could then be wound into a

compact roll and contained in a small box. An interesting example of this work was the method used to speed up the repair of damaged warships of the U. S. Navy. Before the ship started back to the United States, photographs of the damage would be flown to the navy-yard on the west coast. While the ship was en route, the complete set of blue prints would be copied on microfilm from the master set in Washington and the reels of microfilm would then be flown to the west coast navy-yard where the repair was to be made. Enlargements of the damaged sections were made from the films and the sections were then refabricated ready for installation when the ship reached port (*Business Week* 18: 38 June 2, 1945, also *Automotive and Aviation Industries* 91: 98 December 1, 1944).

The photographic work of the Federal Bureau of Investigation was described by Dunlop under the headings of investigation, examination of evidence, arrest, and photography of the suspect, and presentation of the evidence (*J. Phot. Soc. Amer.* 11: 285, September, 1945).

As the year drew to an end, many of the war projects were discontinued. One of these was V-mail, an adaption of the British Airgraph system by which letters were microcopied onto 16-mm. film, 1800 to a 100 foot roll, for transmission by air to their destination where they were enlarged about one-half original size before sending them on to the addressee. Between June, 1942 when V-mail was started in this country and Oct. 31, 1945 when it was stopped, more than 1,250,000,000 pieces were handled. The plan resulted in a space saving of about 98 percent in shipment.

Greatly enlarged pictures of the blood vessels of the eye were made with a new ophthalmic camera which was designed by Wing Commander Pierce, R.C.A.F. A high intensity discharge lamp was used for exposure with a lens operating at f/80 to f/100. The photographs in color were used to study the vitamin deficiency of flying personnel.

The Pacific war provided a great testing ground for checking the resistance of photographic materials, chemicals, and equipment to heat, humidity, insects, bacteria and fungus. Many new methods of tropic packaging were devised during the war and it was expected that some of these packings would be used for peacetime shipment to tropical regions of the world. The packagings included waterproof laminated bags, preservative dips, and rip-strip cans. Two special combat cameras of rugged construction, the Graphic 45 and the Simmon, were introduced during the year. Both models had certain features intended for protection under rigorous field conditions.

The motion picture studios in Hollywood did many things to aid the war effort. Some of this work has been described—such as the preparation of training films for the Army and Navy, the making of short pictures to aid the war bond drives, and the reduction printing of feature motion pictures onto 16-mm. film for entertainment of service men and women at bases throughout the world. Now it can be told that the famous "miniature" departments of the west coast studios were called on to reproduce large sections of the Japanese mainland on a scale of one foot to the mile. One of these "target" areas was 90 by 60 feet; when completed it was photographed with special equipment to simulate the view that would be seen on an actual bomb run. The prints of the picture were rushed to Saipan

to be shown over and over to the B-29 crews who were to bomb Japan (International Photographer 17: 5, November, 1945).

Inventory and Reconversion. During the final months of the war, military demands for photographic materials became so great that it was impossible to fill civilian needs and a recognized shortage of film and paper prevailed. Some idea of the military requirements can be obtained from figures released by one large manufacturer for the year 1944. The equivalent of 300,000,000 rolls (820-size) and sufficient paper to make 7,760,000,000 prints was delivered to the armed forces. Since dealer's stocks were very low at the war's end it was the job of the manufacturer to replenish these as quickly as possible. It was fortunate for both consumer and manufacturer of photographic products that the photographic industry had fewer reconversion problems than many other industries. It was generally expected that by the end of the year much of the amateur and professional stocks of film and paper would be well along toward full replenishment.

Back orders of service men and the needs of the armies of occupation were given preference in the matter of equipment, and it was predicted that domestic dealers would have to wait longer for such items as cameras, enlargers, projectors, etc., than for sensitized materials. One of the largest motion picture plants in Europe, located near Munich, Germany, was taken over in August by the Information Services Control Command of the U. S. Army Forces for the production of documentary and news films. It was understood these would be used for education of the Germans as an antidote for their long dosage of Nazi propaganda (N.Y. Times 94: 18, August 5, 1945).

Reflecting in some measure the tremendous growth in the use of 16-mm. motion picture films during the war, an expansion of the peacetime uses of such film was predicted. A new series of industrial films on "Problems in Supervision," was completed by the U. S. Office of Education (*Business Screen Mag.* 6: 16, no. 2, 1945). Traditionally motion pictures on film 35-mm. wide had been used almost exclusively before the war for entertainment showing in theaters throughout the world. During the war, thousands of prints of feature pictures, newsreels, and shorts were made on 16-mm. film and shown to members of the services. The quality of such prints was very good and it was not surprising, therefore, to learn that a number of firms were planning continued use of 16-mm. film. Loew's International Corporation announced a plan to distribute abroad for showing in rural districts reduction prints of feature pictures and shorts made by Metro-Goldwyn-Mayer (*Mot. Pict. Herald* 160: 29, Aug. 25, 1945).

For use in the rehabilitation of war veterans, a plan was announced for equipping hospital wards with small projectors capable of projecting micro-film images on the ceiling. This equipment was operated with very simple controls by the patient (*Amer. Library Asso. Bull.* 39: 23, January, 1945).

A portrait photographer named Karsh who lived in Ottawa probably made some of the finest character studies of British and American leaders in the war (*Life* 18: 73, Apr. 23, 1945; also *Popular Phot.* 16: 20, May, 1945).

One of the leading photographers of the world, Capt. Edward Steichen, U.S.N.R., was named to the position of Director of the newly created U.S. Navy Photographic Institute. Purposes of the

Institute were to promote and encourage photography of naval subjects, and to make awards for outstanding work by Navy and civilian photographers.

Color Photography. It was generally indicated through increased national advertising and customer's requests to dealers during the latter part of the year that public interest in color processes was growing. Demand for color films had been brisk in the face of a dwindling supply throughout the summer months but the prospect for more materials appeared somewhat brighter toward the end of the year. The great majority of transparencies and 8-mm. and 16-mm. motion pictures were still being made on Kodachrome film as had been true since the introduction of this product ten years previously. It was reported from Rochester in November that the Eastman Kodak Company was starting construction of a new plant to be devoted entirely to processing color film and prints, in anticipation of a need to increase greatly their annual production capacity.

Full details for processing of Ansco Color sheet film and Reversible Printon were published by Bates (*Ansonian* 9: 4, March-April, 1945). Wobbe published a comprehensive article on Gasparcolor Opaque, a multi-layer printing material for making color prints by contact or enlargement from color transparencies. During the processing of this film the dye in all three color layers is bleached out where any silver image exists, and after the silver image is bleached a positive color image is left (*The Camera*, Baltimore, 67: 21, August, 1945).

The first public demonstration of the Kodak Dye Transfer Color Process occurred Sept. 24-25 at the Wisconsin State Photographer's Convention. This is a method of making imbibition prints from sets of dyed matrices prepared from separation negatives. A special apron was used for quick and accurate transfer of the final color images. The method is an improvement over the older Wash-Off Relief process. With the process color prints could be made easily and quite rapidly from 35-mm. or sheet color transparencies.

The Ansco Colorpak Process for professional motion pictures was demonstrated at the Society of Motion Picture Engineers' meeting in New York in October. It is a reversal monopack process of the same type as that used with Ansco Color. A motion picture made by the negative-positive color motion picture process developed by Agfa in Germany during the war was shown in New York in the fall.

A color photograph of the "Big Three" at the Potsdam conference was transmitted by radio by the U.S. Army Signal Corps technicians and Wash-Off Relief prints from the transmitted separations were released for publication. A one-shot camera was used to make the original separation negatives (*The Camera*, Baltimore 67: 75, October 1945).

Time-lapse color motion pictures of whole sky were shown by Condit at the March meeting of the Photographic Society of America in Rochester. To make these unusual pictures he used a Ciné Kodak Special fitted with a motor drive having a set of gears which allowed several different speeds, varying from one to twenty pictures per minute. The camera was focussed on a plane mirror located 30 inches above a convex mirror 12 inches in diameter which reflected the entire sky hemisphere. When the film was projected at normal rate of sixteen pictures per second, cloud movements for an entire day could be seen

in a minute or so. The motion pictures were expected to be of value in connection with weather studies.

A paper on color photography applied to war surgery was published by Hennell who made several thousand sets of separation negatives in British hospitals and in Italy during the war. For this work he preferred a National Photo Color camera and open flash technique, using four flash bulbs with the lens diaphragm set at $f/16$. Prints were made by three color carbonyl (Phot. J. 85A: 144, June, 1945). The choice of suitable colored backgrounds when photographing pathological specimens was shown to have an important effect on the interpretation of the photograph (*Radiography and Clinical Phot.* 20: 34, 1944).

In medical work where accurate reproduction of color is often necessary for diagnosis, Offenhauser pointed out that some of the very common biological stains are not reproduced accurately by 16-mm monopack color films. He presented previously unpublished data on films and filters which had been helpful in solving some of the problems of color duplicating in commercial laboratory work (*J. Soc. Mot. Pict.* 45: 113, August, 1945).

Forest discussed the design and use of an automatic processing machine for Ansco Color 16-mm. motion picture film (*J. Soc. Mot. Pict. Eng.* 45: 313, November, 1945). Practical utilization of a monopack 35-mm. color film was discussed by Clarke who photographed every scene of the full length feature production *Thunderhead—Son of Flicka* for Twentieth Century Fox Films. His paper described the problems encountered, the techniques used and benefits derived (*J. Soc. Mot. Pict. Eng.* 45: 327 November, 1945).

The use of tone correction masks when making separation negatives from Kodachrome transparencies for color reproduction was recommended by Speck (*J. Phot. Soc. Amer.* 11: 461, November, 1945). It was claimed by Yule that it was advantageous to make masks of this type slightly unsharp. (*Phot. J.* 84:321 November, 1944).

The history, chemistry, and characteristics of color coupler development were discussed in a comprehensive article by Tull which included an extensive bibliography (*Phot. J.* 85B: 13, January-February 1945).

Physical Measurement and Standardization. A number of expeditions went to Montana and central Canada to observe and photograph from the ground and from the air the total eclipse of the sun on July 9. Both ordinary and color pictures were taken of the corona. Probably the best results were those obtained by the Royal Canadian Air Force who made direct views of the corona on panchromatic and infrared film at 17,000 feet and photographed the flash spectrum at 26,000 and 33,000 feet. This is believed to be the first time that the flash spectrum has been photographed from an airplane.

A photographic recorder, designated an 'interferograph', was designed by Saunders for the photography of interference phenomena. A strip of 35-mm film is used on which 200 easily readable fringes may be recorded on one meter of film. (*J. of Research*, National Bur. of Standards 35: 157, September, 1945).

Jones and Higgins made an investigation of the relationship between the granularity and graininess of developed photographic materials. They concluded that, "Inasmuch as the ratio of graininess to granularity is not the same function of density for different materials, graininess in general cannot be computed as the product of granularity and

a function of density which is independent of the material." (*J. Opt. Soc. Amer.* 35: 435, July, 1945).

A modified densitometer for reading the integrated densities of processed monopack color films was described by Sweet (*J. Soc. Mot. Pict. Eng.* 44: 419 June, 1945).

A progress report of the work of the American Standards Association War Committee on Photography and Cinematography-Z52 was published by McNair indicating that 25 American War Standards had been approved by October, 1944 and about 40 additional ones were expected to be adopted by April, 1945. (*J. Soc. Mot. Pict. Eng.* 44: 386, May, 1945). Farnham reported that photographic flash lamps were evaluated on the basis of their picture taking ability and a standard method of packaging to withstand transit and other useful details were described in specification Z52.43-1944. New sound quality test standards for 16-mm motion picture prints were published (*Photo Trade News* 9: 29, March, 1945; *ibid* 9: 20, April, 1945).

Laboratory and trade tests of intermittent sprockets on 35-mm motion picture projectors were stated by Talbot to have shown that the adoption of a slightly larger diameter sprocket (0.943 in. as compared with 0.935 in.) will give from 2 to 3 times increase in "wear life" of projected film (*J. Soc. Mot. Pict. Eng.* 45: 78, August, 1945). This change was endorsed by the Subcommittee on Projector Sprocket Design (*ibid* 45: 73, August 1945).

Photographic Apparatus. Manufacturers of equipment began in September to get under way their long deferred plans to resume peacetime building of photographic apparatus. Production was being resumed as rapidly as possible with the available supplies of raw materials and using chiefly tools and designs that had been stored during the war. It was predicted that dealers would have limited stocks for some months to come because backorders of service men and the military requirements of the armies of occupation would get preference.

There was much speculation relative to the type of design that would be chosen for new amateur cameras, articles in some photo dealer publications seemed to favor small twin-lens reflex type cameras. Another suggested type would use 70-mm film. Several firms announced shutters with built-in flash synchronization. Improved lenses were expected as the American optical industry was known to be capable of producing lenses second to none anywhere in the world. The war acted as a great stimulant to an expansion of the optical industry in Australia, according to reports by the U. S. Department of Commerce. Five plants produced 14 types of camera lenses, including one of 36-inch focal length. (*Foreign Commerce Weekly* 19: 23, May 19, 1945).

For color photography on daylight type color film, new blue flash bulbs were announced with which it was claimed improved color pictures could be obtained.

A portable printing and developing machine was described which prints either roll stock or sheets from tracings at a speed up to 6 feet per minute. Illumination is provided by a 2,000-watt mercury vapor lamp. (*Aeronautical Engineering Rev.* 4: 155, May 1945). A new film developing machine featuring special methods of turbulence to insure better uniformity of development was described by Leshing and Ingman (*J. Soc. Mot. Pict. Eng.* 44: 97, February, 1945).

A film strip projector using 16-mm film instead of the conventional 35-mm film was described. With this apparatus, 1,000 slides could be included

on 25-feet of film. An automatic timer restricted the time that each picture was held in the gate to not more than 2 seconds; if it was necessary to retain it longer on the screen, the picture was repeated (*Film World* 1: 15, February, 1945).

A polarized, plastic motion picture screen was devised by Bodde which was claimed to give very uniform illumination over its entire surface. It was claimed to be useful for rear projection work for special process motion picture photography, for television and outdoor advertising (*Plastics* 3: 36, August, 1945).

Brief details were published concerning a camera used during the war for undersea photography at various depths to 225 feet. A domeshaped aluminum pressure case was said to protect the automatic film transport system, wide-angle lens, and synchronized shutter (*Business Week* September 29, 1945, p. 74). Another underwater camera used a transparent Lucite housing which permitted a clear view of all dials by the user (*Film World* 1: 133, May, 1945).

The Photographic Process. Amateur and professional alike were being encouraged to purchase package chemicals which were made available in sizes to make up different volumes of solution from a few ounces to as much as a hundred gallons. The convenience, accuracy, and simplicity of chemicals in this form seemed to appeal to the user. Some of the newer developers had very descriptive names such as Dektol, Microdol, Selectol, and so on. When preparing developers with hard water, calcium salts occasionally are precipitated. Henn and Crabtree studied this problem and recommended the addition of sodium tetraphosphate to a developer for the prevention of calcium sludge formation (*J. Soc. Mot. Pict. Eng.* 43: 426 December, 1944). Photoengravers use developers containing formaldehyde and hydroquinone for halftone images of very high contrast. The properties of such developers was investigated by Yule (*J. Franklin Institute* 239: 221, March, 1945). The catalytic mechanism of development, filament growth during development, and the Gurney-Mott hypothesis of latent image formation were discussed in an elementary account published by James (*J. Phot. Soc. Amer.* 11: 73, February, 1945).

Various ways of using urea in photographic developers were discussed by Dersch as a means of obtaining increased developing speed, for reviving partially exhausted developers, and for developing at temperatures as low as 40° F. (*J. Phot. Soc. Amer.* 11: 467, November, 1945).

The use of a polarograph in the analysis of photographic baths for aluminum alum, chrome alum, and sulfite was described by Shaner and Sparks (*J. Soc. Mot. Pict. Eng.* 45: 20, July, 1945). An improved type intensifier containing quinone, thiosulfuric acid compounds, a strong acid, and an oxidizing agent was worked out by Muehler and Crabtree for use with underexposed or excessively thin negatives. (*J. Phot. Soc. Amer.* 11: 81, February, 1945 et seq.).

Bibliography. Two new photographic publications appeared: *Film World*, a non-theatrical film magazine devoted to uses of 16-mm. film and published by Ver Halen Publications, Hollywood, California; and *Film News* which covers world wide news of documentary and educational motion pictures. It is published by the American Film Center, New York.

Noteworthy books published during the year are as follows:

1. *History of Photography*. J. M. Eder, Colum-

bia University Press, New York. This is a translation by E. Epstein of Dr. Eder's important work, *Geschichte der Photographie* (4th ed. 1932).

2. *Photography*. 2 vols. U. S. Navy, Superintendent of Documents, Government Printing Office, Washington, D. C.

3. *Practical and Theoretical Photography*. J. M. Blair, I. Pitman, New York, 2nd ed.

4. *British Photographers*. C. Beaton, W. Collins, Glasgow.

5. *Nature and Camera*. O. G. Pike, Focal Press, London.

6. *Practical Optics*. B. K. Johnson, Hatton Press, London.

7. *Photography as a Career*. A. Krasznak-Krausz, Focal Press, London.

8. *Encyclopedia of Sound Motion Pictures*. J. R. Cameron, Cameron Publishing Company, Woodmont, Conn. 5th ed.

9. *Photographing in Engineering*. C. H. S. Tupholme, Faber and Faber Ltd. and the Hyperion Press, Ltd., London.

10. *The Art of Photographing Children*. Frank and Molly Partington, Fountain Press, London.

11. *The Use of Photographs in Layout*. H. F. Kraus, MSR Publishers, New York.

12. *Photography and Platemaking for Lithography*. I. H. Sayre, Lithographic Textbook Publishing Co., Chicago, 2d ed.

13. *La Technique Photographique*. L. P. Clue, P. Montel, Paris, 3d ed.

14. *Sensitometrie des films Sonores*, A. Lovichi, A. Lahure, Paris.

15. *Physik und Technik des Tonfilms*, H. Lichte and A. Narath, S. Hirzel, Leipzig, 2d ed. Lith. and printed by Edwards Brothers, Ann Arbor, Mich.

GLENN E. MATTHEWS.

PHYSICS. Atomic Energy. The atomic bomb development and the practical release of atomic energy which culminated in 1945 was the most extensive and expensive scientific research project in the world's history. Begun on a large scale in 1940 it was a war secret undertaking until the first bomb was dropped upon Japan on Aug. 6, 1945. Its cost was \$2,000,000,000.

Historic dates in science's achievement of atomic power have been added to human chronology: Dec. 2, 1942, when the first self-maintaining nuclear chain reaction was initiated in an uranium-graphite pile at Stagg Field Stadium, Chicago; July 16, 1945, 5:30 A.M. when the first atomic explosion created by man blasted the New Mexico desert; Aug. 6, 1945, when the first atomic bomb used in warfare was dropped on Hiroshima, Japan.

The immediate start of the researches which resulted so spectacularly was in January, 1939, when two Germans, Otto Hahn (awarded the 1944 Chemistry Nobel prize in 1945) and F. Strassmann proved that an isotope of barium was produced by neutron bombardment of uranium, the neutron being a fundamental particle of matter without electrical charge and with a mass about equal to that of the proton or nucleus of the hydrogen atom. Two refugees from Germany, O. R. Frisch and Lise Meitner, suggested that the absorption of a neutron by a uranium nucleus sometimes caused that nucleus to split into approximately equal parts with the conversion of some of the mass, by Einstein's 1905 formulation, into enormous quantities of energy, a process called fission. These reports were discussed on Jan. 26, 1939, at a conference on theoretical physics at Washington, D.C., jointly sponsored by the George Washington University and the Carnegie Institution of Wash-

ington, with Niels Bohr of Denmark, Enrico Fermi and others discussing the problem. Experimental confirmation of uranium fission in several laboratories followed, and the suggested likelihood of emission of neutrons in the process was demonstrated. This indicated the possibility of a chain reaction releasing energy explosively, the neutrons produced splitting asunder other uranium atoms and producing more neutrons as well as energy.

By June, 1940, just after the fall of France, when scientists voluntarily restricted publication of papers on the subject of uranium fission in scientific journals, it was known that slow neutrons caused fission in one isotope, uranium 235, but not in the other, uranium 238. It was known that the average number of neutrons emitted per fission was between one and three. A chain reaction had not been achieved but its possibility was clear.

What happened after the curtain of war secrecy was lowered was not revealed until Aug. 10, 1945, when the War Department released as a part of its atomic bomb explanation the now famous Smyth report, a semi-technical report on the processes by which the use of atomic energy for military purposes had been achieved. It was written by Dr. H. D. Smyth of Princeton at the request of Maj. Gen. L. R. Groves, U.S. Army, who headed the "Manhattan Project" as the Army called the atomic bomb project during the war. It is available as a government document from the Superintendent of Documents, Washington, D.C. at 35 cents. Practically all the technical and scientific data about the atomic bomb that can be published without violation of security regulations are contained in this report.

Research on U-235 fission, using heavy water (D_2O) as the moderator, slowing down the neutrons, was under way in both England and Germany in 1939. American scientists substituted specially purified graphite for heavy water.

In order to make the fission reaction in U-235 self-sustaining, it was found necessary to separate U-235 (less than $\frac{1}{2}\%$ in any uranium sample) from the more abundant isotope U-238 (more than 99%). The more common kind prevents the chain reaction, by absorbing neutrons.

An enormous isotope separation plant, using gaseous diffusion methods, was erected at Oak Ridge, Tenn. Much of the experimental work for the whole project was done there.

Two new elements, heavier than uranium 92, both of which were made to order and neither of which were known to exist in nature, played an important part in the atomic bomb researches and manufacture. These were elements 93 and 94.

Formation of element 94 from uranium 238 by neutron capture was effected in the Radiation Laboratory of the University of California in 1941. The new element was found to undergo slow neutron fission like uranium 235. It was named plutonium (Pu).

Plutonium, radio-active but approximately as stable as radium, was obtained from uranium 238, element 92, by way of the intermediate shortlived element 93, named Neptunium (Np) discovered in 1940. Known isotopes of the new elements announced are: 93 Np 237, 93 Np 238, 93 Np 239, 94 Pu 238, 94 Pu 239. Uranium 238 changes to neptunium and neptunium to plutonium by beta-ray transformation. Plutonium emits an alpha ray and slowly changes back into U-235.

Manufacture of plutonium from U-238 allowed utilization of the inert uranium isotope for atomic power purposes. It allowed the advantage of sharp chemical separation of different elements instead

of the tedious diffusion methods of isotope separation.

In the course of the researches it was also possible to make for the first time two heavier trans-uranium elements, numbers 95 and 96, by bombardment with high-energy helium nuclei or alpha particles.

Production of materials for atomic bombs was at first planned to be located at the Clinton Engineer Works at Oak Ridge in the Tennessee Valley. Later the plant for full scale manufacture of plutonium was built at Hanford, Wash., and the bomb laboratory was located at Los Alamos, N.M.

The organization of the atomic bomb project was at first under the Office of Scientific Research and Development. During 1942 and the spring of 1943, control was gradually shifted to the Army, and in May, 1943, the Army Engineer Corps took over.

At the peak of the atomic bomb project construction 125,000 were employed and at the end of the war, 65,000. Among them were several thousand scientists and engineers, including the leading atomic scientists of this country and Allied nations.

Peacetime utilization of atomic energy is considered practical if safeguards are developed and further developments are made. The nuclear reactions producing energy can be produced at a slow, non-explosive rate and, at the cost of uranium in comparison with coal and oil, should eventually be economical for power use, especially in locations that do not have supplies of fuel or hydroelectric power.

There are, however, two major difficulties: The nuclear reaction gives off large quantities of powerful radiation that are extremely poisonous or damaging to human life. This means that a uranium power plant needs to be surrounded by great masses of concrete and metal to confine these radiations. The power-production entails the production of material that can be used in the making of atomic bombs for war and thus every peaceful atomic power plant is an atomic bomb factory if this material is used that way. For that reason international control of the atomic bomb may make necessary the foregoing of the use of atomic power.

Due to the shielding of the atomic power plants and their great weight, it is doubtful if they can be used to propel automobiles or airplanes, or for relatively small power plants. They may be adapted to use in large ships, however.

American industry and science can begin reaping the benefits of large-scale atom-splitting, without having to wait for the development of atomic power. These benefits will flow from the new engineering principles, new equipment and new methods which had to be used under the forced draft of war to produce the atomic bomb in time for use as a weapon.

In addition to hastening the unconditional surrender of the Japanese, the atomic bomb has presented the world with its largest problem in international relations. Due to its destructiveness and small size, the atomic bomb carried to its destination by jet or rocket planes is a weapon of attack for which no adequate counter measure is apparent. World cooperation seems to be the only effective defense against the atomic bomb.

Nobel Prize. Prof. Wolfgang Pauli, now visiting professor at the Institute of Advanced Studies at Princeton, N. J., was awarded the 1945 physics Nobel prize. He was born in Vienna, studied at Munich and until 1940 was at the Technical College in Zurich, Switzerland. His theoretical studies on atomic structure have contributed to advances

in physics, among them the release of atomic energy. He is best known for the exclusion principle that bears his name.

Radar. Although the development and use of radar had been revealed during the war, it was not until after the end of the war that many details were made known.

The small tube used in radar may develop as much as hundreds of thousands of watts. The power must be applied in a burst for only a millionth of a second and then turned off completely to wait in repose for the echo to come back. Development of this oscillator tube was a major achievement.

The receiver, sensitive enough to pick up the tiny echo bounced off a distant ship or plane, must be protected against the terrific power burst of the transmitter, which would paralyze it or burn it out completely.

Transmitter and receiver are built in one box and operate on one antenna. This is really necessary because the directional antenna acts as a "searchlight" sending the signal out and as a "telescope" in picking up the echo. Naturally, both searchlight and telescope must be aimed in the same direction. This is sure when one antenna is used for both purposes.

But use of one antenna requires that the receiver be disconnected when the antenna is sending out the burst of power. The means for doing this was a particularly difficult piece of development, details of which are still not revealed.

Not only is it necessary to disconnect the receiver while the transmitter is working, but within a millionth of a second the receiver must be open to receive the faint echo and the transmitter must be closed off so that it will not absorb any of the weak incoming energy.

To carry the energy from the radar transmitter to the antenna, ordinary wire and coaxial cables are unsatisfactory. For the microwaves used in radar, it is more efficient to use wave guides, which are really carefully proportioned hollow pipes known to radar men as "plumbing." For certain of the equipment these wave guides may look like rectangular rainpouts. The high frequency currents from the transmitter are converted into electromagnetic radiation at the end of the pipe and guided through the pipe by successive reflections from the inside surface.

The antenna design had to be highly directional. This can be done either by building it up of an array of small antennas, or by using the searchlight principle of spraying the energy into a large parabolic mirror which focusses the energy into a beam. In either case, the larger the antenna, the sharper the beam, but it could be made small enough to go on an airplane.

To use the radar to search the whole expanse of sea and sky, the antenna is turned—swung around or up and down to direct the beam in the various directions.

What the radar picks up is shown to the operator on a television-type screen. In the simplest type, an electrical mechanism causes a spot of light to trace a line across the screen at a uniform speed. The spot starts at one side at the instant the transmitter goes off. Whenever an echo comes in, the spot gives an upward bounce or "pip." The distance of this pip from the starting point gives the time required for the echo to return and therefore the distance of the ship or other target.

A target 1,000 yards from the radar will give a pip only six millionths of a second later than the transmitted pulse.

It is possible to set up the radar system to see in all directions on one screen, with any ships and the shoreline appearing as in a map, the radar operator and his ship in the center. This is done by rotating the whole antenna system from one to 20 times a minute, scanning the entire horizon.

In this case, the dot of light starts from the center and moves outward in a direction corresponding to the direction of the antenna. Each echo, instead of making a pip, makes a bright spot of light, indicating both the direction and the distance of the ship that reflected it. The screen thus is an accurate map showing the positions of all the surrounding ships. The radar operator can, in fact, watch the shells move across the screen toward the target pip, and can even see the splashes they make when they hit the water.

Anti-radar. When the Allied radar jamming system was first sprung on the Germans in 1943, it threw their defenses into utter confusion and decreased by 75% the effectiveness of their anti-aircraft guns. In the last days of the wars, both in Europe and the Pacific, the Allied anti-radar devices had made such a boomerang of German and Japanese radar that they often gave up using radar lest it betray them.

Anti-radar devices made public in 1945 were of two general types: aluminum foil called "window" or "shaff," and electronic detectors and jammers. The use of the foil became known to many during the war, but the extent of its use was revealed only afterwards. Approximately 20,000,000 pounds of aluminum foil was dropped in Europe alone. Cigarettes and candy bars in the United States were without aluminum wrappings because the entire production of foil was needed for window.

Aluminum foil is an excellent radio reflector and it returns a relatively strong radar echo in proportion to its size. What made it particularly valuable as window, however, was a discovery made by the scientists that its effectiveness is greatly increased when the strips were cut to one-half the radar's wavelength. These "tuned" strips send back a very strong echo.

The thin strips of aluminum used are only a tiny fraction of an inch wide and a few inches long. A bundle of 6,000 strips weighs six ounces. A single bundle dropped from a plane, scattering in the air, looks to a radar like three heavy bombers. In one test the scope of a radar was watched while this electronic "smoke screen," or window trail, was distributed by three planes. Following planes in the trail failed to record on the scope, even a half-hour later.

Electronic jammers operate on the simple principle of radio interference, similar to the interference with which most home radio users are familiar when they receive two broadcasts from two stations on the same wavelength. The jammers attacked enemy radar receivers with radio waves from planes modulated by random "noise," which drowned out any audible radio echoes from the radar's target and obliterated all signs of the target from the radar's screen, or scope.

A radar can be jammed only by waves of the same wavelength or frequency. A basic instrument in radar countermeasures is an electronic detector called the "search receiver" which can be tuned to intercept a radar signal and determine its frequency.

When equipped with directional antenna, this receiver can locate an enemy radar set. These direction-finding receivers have a much greater range than radar itself, and for this reason often

proved better than radar for locating the enemy. A radar-hunting operator could locate an enemy radar station long before the radar could locate him.

Proximity Fuze. The proximity fuze is a tiny radio set device in the nose of a projectile. Its use in antiaircraft fire directed at Jap suicide bombers, in artillery barrages in the famous Battle of the Bulge in France, and in neutralizing Nazi buzz bomb attacks on London, is credited as a major help in winning both the European and Pacific wars.

The VT, or variable time fuze, explodes a projectile as soon as it comes close enough to a target to inflict damage.

For two and a half years of war, projectiles and bombs fuzed with this proximity device inflicted terrific damage on the enemy. The only clue to its existence was what appeared to be unprecedented accuracy of gunfire; it caused devastating destruction in spite of slight unavoidable inaccuracies in aim.

The VT fuze is an extremely rugged five-tube radio sending and receiving station which fits into the nose of a projectile. The heart of this miniature radio station is a vacuum tube which sends out electro-magnetic waves or impulses. The impulses are reflected back to the tube by any target that gives a radio reflection, such as metal objects, water or earth.

Sono-Radio Buoys. Sono-radio buoys located Nazi submarines under the waters of the Atlantic and guided Allied destroyers to the spot for the kill.

Visual and radar sighting served well as long as the enemy U-boats stayed on the surface but were of no value when the subs remained under water. The sono-radio buoy gave the airplane ears to hear, locate, and to follow a submerged U-boat.

The warned airplane could itself attack or call destroyers to the spot.

By relaying subsurface noises to the plane, the sono-radio buoy also made it possible to know the outcome of the attack. Sometimes the propeller beat of the U-boat as it fled the scene could be heard. Sometimes ominous breakup noises followed by silence testified to the death of the sub.

There was developed a sono-radio buoy light enough to be carried in quantities by airplanes, cheap enough to be expendable, and rugged enough to withstand the shock of water entry. In addition it had battery-power sufficient for several hours' life, and adequate acoustic and radio range.

The floating sono-radio buoy picks up the sounds of a submerged U-boat by hydrophones which change the sound waves in the water into small electrical voltages that are amplified and converted into radio waves in the transmitter part of the buoy. Airplanes carried receivers tuned to the same frequency of the buoy transmitters.

Loran. Ships and planes plying the international air and sea lanes can locate their positions accurately to within a few thousand feet by means of the "loran" navigation system developed and constructed during the war.

Loran consists of a vast network of radio stations which in effect spread into space an electric stop watch accurate to a millionth of a second. By means of a little box, which aboard airplanes weighs only 35 pounds and should cost about \$500 in peacetime production, dancing green lines on a cathode ray tube read by the navigator allow him to place the location of his craft with as great accuracy as is provided by celestial navigation based on shooting the stars or the sun with a sextant.

First put into actual operation late in 1942, loran

was one of the secret weapons in fighting German submarines in the Atlantic. Later, as the war was carried to other parts of the globe, loran went to the fighting fronts in the air and on the sea with its radio impulses extending over enemy-held territory in order that bombers and ships alike might navigate safely. At the end of the war 70 loran stations sprayed their signals over three-tenths of the earth's surface. A total of 90,000 loran receiving boxes were ordered for war use on ships and aircraft.

Loran is not radar, but it does use radio. By comparing two radio signals from stations separated by about 400 miles, a navigator can locate exactly the position of the craft on the sea or in the air. Simple charts or tables are used.

The determination of position is based upon very accurate measurement of the difference in the time of arrival of signals from two radio stations operating on a frequency just above the broadcast band. The part of the radio spectrum used is that formerly used by amateurs. Signals of the two transmitting stations are precisely synchronized.

The loran receiver determines with great accuracy the difference in the time at which the two signals from the loran transmitting stations are received. Curves are printed on a navigation chart showing the loran lines of position for various time differences. These sweep around the transmitting station's location in the form of hyperbolas. Since the areas of frequent travel by ships and planes are blanketed by the loran signals from several transmitters, the navigator can determine three or four or more such lines of position. Where these lines cross gives the point known as a "fix," which represents on the navigating chart just where the craft is located.

Loran gets its name from the fact that it is a long range aid to navigation (*lo* from long, *r* from range, *a* from aid, and *n* from navigation).

In the daytime loran can be relied upon for 700 miles from the transmitting station, while at night, thanks to the reflection of the signals in the 160-meter band by the ionosphere, reliable determination of position can be made at twice the maximum daytime range of the transmitters.

Television. Extreme sensitivity is the striking feature of a new television "eye." This television camera tube is so sensitive that it can pick up scenes illuminated only by candle or match light, or scenes with invisible infrared rays in a blacked-out room. The Image Orthicon resembles a large tubular flashlight in size and shape. It is about 15 inches long, with a shank about two inches in diameter, and a head three inches in diameter and three inches long. It has three main parts: an electron image section, an improved Orthicon-type scanning section, and an electron multiplier section in which the relatively weak video signals are magnified before transmission.

The principle on which the tube is based is known as secondary electronic emission. This involves the use of electrons from a primary source as missiles to bombard a target, or a series of targets, from each of which two or more electrons are emitted for each electron striking it. The primary source in the tube is a photo-sensitive face on which the light from the scene being televised is focused by an optical lens system.

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WATSON DAVIS.

PITCAIRN ISLAND. An island in the South Pacific, approximately midway between South America and Australia. Area: 2 square miles. Population (June 30, 1943): 177. The island was originally settled in 1790 by mutineers from H.M.S. *Bounty* and native men and women from Tahiti. In 1902 the islands of Ducie, Henderson, and Oeno were annexed by Great Britain and are now included in the district of Pitcairn. The agricultural products are yams, taro, maize, sweet potatoes, bananas, pumpkins, oranges, melons, pineapples, arrowroot, sugar, and coffee. The Government is administered by an annually elected council of 5 members headed by a Chief Magistrate subject to the control of the British High Commissioner for the Western Pacific. Chief Magistrate: F. M. Christian.

PLANT INDUSTRY, SOILS, AND AGRICULTURAL ENGINEERING, Bureau of. A Bureau of the U.S. Department of Agriculture, created as the Bureau of Plant Industry in 1902. Activities include investigations of plant production and improvements of soils in which they are grown and the engineering problems concerned with farming. During 1945 most of the Bureau's activities were focused on experimental work in Central and South America to establish commercial rubber production in the Western Hemisphere. Headquarters: Plant Industry Station, Beltsville, Md. Chief: Robert M. Salter.

PLASTICS. During 1945 the plastics industry, still emerging from its pioneering stages, realized many of its potentialities.

Because of war needs, experimentation and development of new plastics were forsaken in favor of undivided production of military materials. Late in the year, however, cellulose propionate, which seriously competes with other cellulosic plastics used for molded products, sheets, and films, was produced on a commercial scale. According to Dr. Gordon M. Kline in the January, 1946, issue of *Modern Plastics*, this material achieves better dimensional stability than cellulose acetate plastic by virtue of greater inherent plasticity and lower moisture sensitivity.

The end of the war made available the details of important industrial developments in German plastics during the war years. One report from an Allied technical team in Germany revealed plastics not manufactured in the United States and another report disclosed new manufacturing processes.

Among its secret war duties plastics were used in the artillery proximity fuse, rockets, M-47 incendiary bombs, armor for vests, and curtains to provide protection against flak, the T-44 frangible bullet, and the No. 77 grenade. Plastics were further used in radomes for radar, insulation on radio equipment, ogives for navy projectiles, impregnation of map paper to produce high-wet strength paper, machete sheaths, desalter bags and melamine trays and tableware.

The versatility of plastics was aptly displayed in the aircraft industry. In addition to their use in the development of materials for structural purposes, plastics achieved increasing utility in gliders, helicopters, small airplanes, air ducts, interior decoration, hydraulic systems, propeller equipment and forming dies.

Mr. W. I. Beach received the John Wesley Hyatt Award for 1944 for his work on the postforming of laminates which provided critically needed parts for the aircraft industry with savings in man-hours, weight, and costs.

Dr. Kline pointed out a trend to resin-bonded plywood in small boat construction and the use of large quantities of this material to alleviate housing shortages.

Plastics continued to fortify its position in numerous industries and professions. In the textile industries, many processes were being modified because of the use of plastics for synthetic fibers, impregnation and surface treatment of fibers and film coatings on fabrics. The shoe industry absorbed millions of pairs of plastic soles. The packaging industry investigated the war-developed plastic films for civilian uses. In the medical profession plastics grew more important in instruments, prostheses, and gauzes.

Ion-exchange resins were used more extensively in the purification of food, recovery of metals, and manufacture of drugs. Outstanding use of plastics was made in resin-bonded magnets, tank linings, compasses, brake linings, signs, luminescent fixtures and dials, irrigation piping, bottles, battery separators and resin-bonded sand cores for foundry use.

Increasing consumer demands stressed the important functions of resin in providing an efficient means for attaching wood, metals, plastic, glass and other materials into composite structures.

In the field of molding and fabricating of plastics, strides were made in the technique of low-pressure molding, in the process of electronic heating as an adjunct to compression molding, in the attaching of laminates together without marring the surfaces and in a simplified method for applying calibration scales and dial faces to precision instruments.

The once-secret manufacture of lenses, containing polystyrene and cyclohexyl methacrylate, for military cameras and sighting instruments was viewed as a significant advance in the development of improved transparent plastics for optical uses.

In his article in *Modern Plastics*, Dr. Kline mentions the varied uses of silicone polymers and its derivatives in the rubber gaskets on searchlights; in the turbo-superchargers on B-29 bombers; in the enamels for baked coatings on heating units; and in the water repellent treatment of textiles, mirrors, windshields, and wallpaper.

POLAND. A central European republic, established Nov. 9, 1918. It was invaded by Germany Sept. 1, 1939, partitioned between Germany and the U.S.S.R. by the treaty of Sept. 28, 1939, and completely occupied by German forces after the outbreak of the Russo-German war on June 22, 1941. The liberation of Poland, begun early in 1944, was completed in the spring of 1945 (see **EVENTS**, below). For details of the partition, German rule in Poland, and the Polish Government-in-exile, see **YEAR BOOK** for 1944, p. 480.

Area and Population. The territorial limits of the new Poland have not yet been finally drawn and no precise figures are available on its area and population. A blueprint of Poland's future boundaries was provided by the decisions of the Potsdam (Berlin) Conference of July 17-Aug. 2, 1945, which placed under Polish administration all German territories east of the Oder and (Western) Neisse rivers, with the exception of a portion of East Prussia. Previously, it had been agreed at the Crimea (Yalta) Conference that Poland's eastern boundary should run along the Curzon Line. The area of Poland within these provisional new boundaries is estimated at 120,782 square miles, with a population of between 23 and 24 millions. For details, see **EVENTS**, below.

Government. Political and social conditions in Poland are in flux. A new Constitution has not yet been drawn up. By and large, however, the original Constitution of the Polish Republic of 1921 has been revived and the semi-dictatorial Constitution, introduced by Pilsudski in 1935, has been discarded by the Polish Provisional Government of National Unity set up on June 28, 1945. Pending the general election which this government is pledged to hold at the earliest possible moment, the Home National Council serves as interim parliament. The Council's 7-man presidency, headed by Boleslaw Berut, exercises the prerogatives of the President of the republic, whose position is vacant. Premier, Edward Osobka-Morawski.

Production. The first statistical data released by the Provisional Government give an incomplete but nevertheless interesting picture of Poland's economic recovery. The coal output rose steadily in 1945, from 1,355,621 tons in May to 3,114,297 tons in November. In the textile industry, the production of wool and cotton fabrics increased from 2,658,663 meters in March to 10,427,663 meters in October. In September, 1,580 tons of cellulose and 8,732 tons of paper were produced, as compared with 195 and 212 tons, respectively, in April. Crops were harvested from 5,948,567 hectares. The production of sugar beets in 1945 was estimated at 500,000 tons. Poland's prewar livestock was drastically reduced under the German occupation, with only 25 percent of the cattle and 35 percent of the horses left.

Education. A school reform introduced by the Provisional Government provides for free, compulsory education for 12 years, including university courses. Poland in 1945 had 29,886 schools. Universities have been re-opened at Warsaw, Cracow, Lublin, Poznan, Lodz and Torun.

Events, 1945. Poland at last rejoined the comity of nations with a new government, a new set of frontiers, new policies, and a new constitution in the making. The conditions for this national revival were created, and its pace was set, by the mighty Soviet offensive on the Eastern Front which began on Jan. 12 and in a few weeks broke the back of German resistance. Poland's capital, Warsaw, was retaken on Jan. 17. By the end of March virtually all of prewar Poland had been liberated.

Toward Recognition. Immediately after the fall of Warsaw, the Polish Provisional Government of Lublin, then recognized only by the Soviet Union, moved into the devastated capital, thus gaining another point in its bid for universal acceptance. In London, the Government-in-exile continued to function with at least the tacit support of the United States and Great Britain. With every new mile of Polish territory liberated by the Russian and Polish armies, the problem of the two rival governments, one in Warsaw, the other in London, became more pressing and unavoidable.

The tangled Polish situation was one of the principal issues facing Roosevelt, Churchill, and Stalin at their Crimean Conference (Feb. 4-11). Although it was not completely unravelled at Yalta, the problem there was brought considerably nearer to an all-around satisfactory solution.

The Yalta Declaration, reaffirming the Big Three's desire "to see created a strong, free, independent and democratic Poland," stated: "The Provisional Government which is now functioning in Poland should therefore be reorganized on a broader democratic basis with the inclusion of democratic leaders from Poland itself and from Poles abroad. This new government should then be called the Polish Provisional Government of National Unity." To effect this change, the three heads of government set up a tripartite commission empowered to consult and negotiate with the various Polish factions.

On the equally controversial question of Poland's future boundaries the three statesmen agreed "that the eastern frontier of Poland should follow the Curzon Line, with digressions from it in some regions of five to eight kilometers in favor of Poland. They recognize that Poland must receive substantial accessions of territory in the north and west. They feel that the opinion of the new Polish Provisional Government of National Unity should be sought in due course on the extent of these accessions and that thereafter the final delimitation of the western frontier of Poland should be postponed until the peace conference."

This agreement doomed the intransigent Polish Government-in-exile, which had flatly rejected the revision of boundaries demanded by Russia and had shown little desire to come to terms with the de facto regime functioning in the homeland. Premier Tomasz Arciszewski of the London Polish Government promptly denounced the Crimean agreement, but his protests were ignored by all other parties concerned. By contrast, former Premier Stanislaw Mikolajczyk, most important of the "democratic leaders" among the Poles abroad who were to be consulted on a new government, on April 15 unequivocally adhered to the decisions of Yalta.

Despite this declaration, and the strenuous spade-work of the inter-Allied commission, the unity talks made only slow progress. At one time they were even threatened with a complete breakdown that might have had incalculable consequences. That crisis arose on May 3 when Soviet Foreign Commissar Molotov, during the San Francisco Conference, admitted that sixteen Polish underground leaders had been arrested by the Russians on charges of "diversionist activity" behind the Red Army lines. The disappearance of these Poles, some of whom had been considered for inclusion into the Government of National Unity, had previously been announced by the Arciszewski regime.

Another disturbing element was Russia's dissatisfaction at the refusal of the United States and Great Britain to invite the unrecognized Warsaw

Government to the San Francisco Conference. As in challenge to this attitude of its western allies, Moscow on April 21 concluded a treaty of friendship and mutual assistance with the Warsaw regime. The treaty was negotiated in Moscow by President Boleslaw Bierut and Premier Edward Osobka-Morawski of the Provisional Government.

Government of National Unity. All these differences notwithstanding, the talks aimed at the creation of a new Polish Government, in accordance with the Yalta formula, continued. A great stride forward was taken when President Truman in May sent Harry Hopkins to Moscow as his special emissary; Mr. Hopkins on June 8 concluded a thirteen-day conference on the Polish problem with Stalin and other Soviet officials.

As a direct result of Mr. Hopkins' patient efforts, the tripartite commission set up at Yalta on June 12 issued invitations to the leaders of the various Polish groups to come to Moscow for consultations on a new government. Scheduled to open on June 15, the conference was slightly delayed by the illness of Wincenty Witos, aged peasant leader, who figured prominently among the "democratic leaders from Poland," mentioned by the Yalta Declaration. A substitute eventually had to be chosen for Mr. Witos, who died a few months later. For the London Poles, Mr. Mikolajczyk attended, accompanied by the Socialist miners' leader, Jan Stanczyk.

The Moscow Conference of the Poles at long last produced the result all the world had been anxiously waiting for: the Polish Provisional Government of National Unity envisioned at Yalta became a reality. On June 23 it was officially announced that the conferees had reached a full understanding on the composition of the new government. A preliminary step was to enlarge the Presidium of the National Council of Poland (hitherto held by Bierut) by the inclusion of Mr. Witos and of Professor Stanislaw Grabski of the London Poles; in this body are vested most of the powers formerly exercised by the President of the Polish Republic.

In accordance with these decisions, the Warsaw Provisional Government resigned on June 28 and was replaced by the Government of National Unity. Osobka-Morawski continued as Premier. Mikolajczyk became one of two Vice Premiers (the other being Wladyslaw Gomolka of the Warsaw group) and also was appointed Minister of Agriculture. Stanczyk was named Minister of Labor. The leader of the Polish troops that had fought their way back into the homeland alongside the Red Army, Marshal Michal Rola-Zymierski, was appointed Minister of War. The Foreign Ministry went to Wincenty Rzymowski. While the balance of power in the new Cabinet unquestionably remained with the Soviet-sponsored Warsaw group,—only five out of 21 posts were reserved to London Poles or to their sympathizers within Poland—Allied diplomats felt that as much had been achieved as could reasonably be hoped for.

Trial in Moscow. The success of the Polish Conference in Moscow was the more remarkable as it coincided with the trial, in the same city, of the sixteen Polish underground leaders arrested by the Red Army (see above). Pessimists freely predicted that the Russians' refusal to release the Poles would cause a new deadlock in the unification talks. That these misgivings proved groundless may have been due, at least in part, to widely circulated reports—which in some measure were borne out by subsequent events—that Stalin had promised Hopkins a general amnesty would follow any conviction of the sixteen Polish leaders.

The trial, before the Military Collegium of the Supreme Court of the U.S.S.R., began on June 18. The principal defendants were Maj. Gen. Leopold Okulicki, commander of the Polish Home Army, and Jan Janowski, Deputy Premier of the Polish Government-in-exile. The charges against them and the other defendants were varied and serious, ranging from the clandestine use of wireless transmitters behind the Red Army lines to the alleged murder of 594 Soviet officers. Also included in the indictment was a charge that the defendants had plotted to bring about a future war in which Great Britain, Germany, and Poland would be aligned against the Soviet Union.

All but one of the defendants pleaded guilty to at least some of the charges brought against them. General Okulicki, in particular, frankly admitted his responsibility for espionage and sabotage acts committed by the forces under his command, but denied charges of terrorism. He and others displayed a certain pride in their actions which they considered patriotic. This attitude was also adopted by spokesmen of the Polish Government-in-exile in London who sought to justify the acts of the underground leaders, rather than deny them.

On June 21, twelve of the accused were found guilty and sentenced to prison terms ranging from ten years (for Okulicki) to four months. In view of the gravity of the charges, the comparative lenience of the sentences appeared motivated by political considerations. A number of the men sentenced to lesser prison terms were released in November, some of them long before the expiration of their terms.

Liquidation of the Government-in-exile. After the new Polish Government had pledged the holding of free elections at the earliest possible moment, in accordance with the Yalta Declaration, the United States and Great Britain extended their formal recognition on July 5. Most of the other United Nations followed suit, except France which had already recognized the new regime on June 29.

Thus the Polish Government-in-exile in London became to all practical purposes extinct, but the winding up of its affairs remained a long and arduous task. The greatest problem was presented by the Polish Army abroad, totalling about 200,000 men. With very few exceptions, the officers' corps of this army was opposed to the new Warsaw regime and attempts were made to influence the rank-and-file to the same attitude.

Immediately following the announcement that the Western Powers had recognized the Polish Government of National Unity, top commanders of the Polish forces in Britain and Italy challenged this decision and pledged continued allegiance to the Government-in-exile. Lt. Gen. Wladyslaw Anders, commander of the Polish Second Corps in Italy, ordered his troops to resist "enemy" efforts to persuade them to return to Poland; Maj. Gen. Klemens Rudnicki declared his men would return "only with arms in hand."

At the insistence of British authorities, polls were arranged for the Polish soldiers in various countries to decide how many wished to return under existing conditions. By mid-November, 23,000 out of 60,000 Polish service men in Britain had requested repatriation to the homeland, but only 15,000 out of 100,000 stationed in Italy had expressed the same wish.

The liquidation of the old government's bureaus and activities also presented many difficulties. The Warsaw Government first balked at a British demand for \$284,000,000 representing pay allowances, pensions, and civil expenses of the London

Poles, but eventually it agreed to pay this debt. Even after this arrangement had been made, publications of the Polish High Command abroad—now practically financed by Warsaw—continued to carry on a bitter propaganda against the Provisional Government. The Polish press protested against this paradoxical situation and also against alleged underground activities of the former Government-in-exile, and by the end of the year things had not yet been fully straightened out.

Poland and Potsdam. During the Potsdam or Berlin Conference of July 17-August 2, representatives of the Polish Provisional Government, including the President of the National Council Bierut, were received by the Big Three for consultation on Poland's territorial demands in the west and north. These turned out to be even greater than any previously put forth, but they were nonetheless met almost integrally, with Russia backing Poland to the hilt and the United States and Great Britain more or less reluctantly acceding.

As a result, Poland received all former German territories east of the Oder and Western Neisse Rivers, with the exception of Koenigsberg and an adjacent area given to Russia. Nominally these territories—East Prussia with Danzig, the eastern half of Pomerania, Upper and Lower Silesia, and a portion of Brandenburg Province—were only "placed under the administration of the Polish State," pending a final delimitation of boundaries at the peace settlement, but all signs pointed to a definitive annexation. Any remaining doubts in the matter were dispelled in the following months as the Polish authorities embarked on a policy of wholesale deportations of the millions of Germans still living in those areas, now marked for integral "polonization." This mass expulsion of an estimated 7,000,000 to 8,000,000 hardly corresponded to the spirit of the Potsdam Declaration which provided for the transfer of populations "in an orderly and humane manner." It was, in fact, begun even before the Big Three meeting at Potsdam opened. To fill the empty space left behind by the departing Germans, the Polish "Resettlement Bureau" appealed in particular to war veterans and to the youth to volunteer for resettlement in the west. Plans were made for the eventual transfer of 7,500,000 Poles into the formerly German provinces but up to the year's end only a fraction of this figure had actually been resettled.

With Poland's western frontier problem virtually settled at Potsdam to the satisfaction of even the extreme annexationists, the road was clear for a Polish-Soviet agreement on final delimitation of Poland's eastern boundary. A treaty to this effect was signed on Aug. 16 in Moscow. In accordance with the Yalta plan, it fixed the border between the two countries at the Curzon Line, with Russia conceding to Poland various strips of territory extending from three to eighteen miles east of the Curzon Line. The treaty defined the new frontier as follows:

From a point about two miles southwest of the source of the San River, thence northeast to the source of the San, then down downstream to a point south of Solina, then east of Przemyśl, west of Rawa Russka up to the Soloika River, thence along the Soloika and Zapadny Bug Rivers in the direction of Niermirow-Jalowska, leaving part of the Bjalowicz forest to Poland; thence to the meeting point of the Lithuania-Russia-Poland-East Prussia frontier, leaving Grodno to Poland. (New York Times, Aug. 17)

Under the same treaty, Russia agreed to turn over to Poland all claims of German property and

assets in Polish territory. In addition, Russia conceded to Poland (1) fifteen percent of all reparations deliveries from the Soviet zone of occupation in Germany; (2) fifteen percent of the industrial equipment due Russia from the western zones of occupation.

The New Poland. The Polish State that emerged from these arrangements is vastly different from the one Hitler conquered and wiped off the map. It has moved bodily westward for hundreds of miles. It has become ethnically more homogeneous and compact. It has been turned from a predominantly agricultural country into one in which industry and farming are extremely well balanced. It has acquired a wide coastline and several good ports on the Baltic Sea. It now has an almost completely round shape.

The Provisional Government, with great energy and considerable success, set about reorganizing the country's economic and social system. Fortunately, the rich industrial resources of Upper Silesia were found to be almost intact, owing to the Red Army's rapid advance in this area in the final phase of the war. Roads, utilities, communications also were in exceptionally good shape.

As a result, industrial recovery in the annexed western territories was far quicker and more complete than in the old Poland which the Germans had thoroughly plundered and devastated. By mid-November, the Silesian steel industry was producing at prewar level. Iron ore mining exceeded the prewar output, but could not fill the industry's full requirements. The deficit was made up through imports of iron ore from the USSR and Sweden. Coal production rose steadily.

The economic system evolved by the new Poland is a compromise between state control and private enterprise, with many activities still in a provisional phase. According to an article written in October by the noted economist Prof. Jaroslaw Orlowski, "government planning is to be found in banking, industry, and transport, and is also of considerable importance in trade. Private capital is prevalent in trade and handicraft, and is paramount in agriculture."

The great land reform initiated in September, 1944, was brought to a conclusion about a year later. During that time, some 10,625,000 acres of land seized from big estate owners in the territory between the Curzon Line and the Oder had been parcelled out to smallholders. There was no attempt at collectivization on the Soviet model, but all forests were nationalized. Key industries in the newly acquired western territories also were taken over by the State.

Political and social conditions were still very much in flux by the end of the year. Some foreign correspondents reported widespread terror and discontent with the new regime, allegations which the Polish press rejected as unfounded or exaggerated. As far as can be ascertained at this stage, Poland is on her way to becoming a semi-socialized democracy, although political freedom in the western sense is not yet fully assured.

JOACHIM JOESTEN.

POLO. Competition canceled through the war years in the United States was not revived last season although an American team led by the nine-goal Cecil Smith of Texas did take part in one tournament in Mexico City. After defeating Mexico's strong Herradura four, Smith's riders lost to the Military Selection team and Mexico City's Hawaiians.

THOMAS V. HANEY.

PONAPE. The main island (158° 10' E. and 6° 45' N.) in the eastern Carolines of the Japanese Pacific Islands. Total area, 145 square miles. Civil population (1938), about 11,468. There is a lagoon around the island formed by an outer reef. Jokai, a fortified islet, 876 feet high, in the lagoon provides the chief harbor landing. A naval establishment and large commercial docks were built by the Japanese. The chief exports are sugar, phosphates, bauxite, alcohol, copra, and dried fish. The island passed under the control of Allied armed forces as a result of the Japanese surrender in 1945.

PORTS AND HARBORS. A curious outcome of the war is that Bremerhaven, Germany, at the mouth of the Weser River and in the province of Bremen, is now an American port, serving that part of Germany occupied by the United States forces. In various ports of Europe these forces are conducting or supervising the clearing of wreckage and sunken ships from berths, docks, and channels, together with the salvaging of ships that can be floated; also the repair or reconstruction of such damaged works as docks, piers, locks, warehouses, freight sheds and cargo-handling machinery. A striking example is Cherbourg, France, which before the war was mainly a passenger port noted for its steamship lines and its elaborate marine and railroad terminal facilities. Besides clearing the works so thoroughly demolished by the Germans, the U.S. forces greatly increased the cargo capacity of the reconstructed port.

Since the Rivers and Harbors Bill of 1944 was defeated in December due to its inclusion of costly controversial projects, the bill passed in March, 1945, was the first since 1938. It included 292 projects, with a total cost estimate of \$382,000,000. The War Department, through the Corps of Engineers, U. S. Army, has jurisdiction over all navigable waters, and in the year ending with June 30, 1945, its civil work included the completion of 16 navigation projects, and the maintenance and improvement of 280 projects on the numerous streams and ports. Many of the larger projects continue from year to year and several, halted by war conditions, are now being resumed. Approved projects which can be put under construction in the fall of 1945 are estimated to cost \$67,000,000, while by the spring of 1946 additional works costing \$450,000,000 may be ready for contract. The Corps of Engineers, U. S. A., has completed port works at Arecibo, Puerto Rico, and is planning the repair and reconstruction of war-damaged ports in the Philippine Islands.

The U. S. Navy also has carried on much port work (emergency, temporary, or permanent), both at its home bases and in the South Pacific. These works are handled by the Construction Battalion (known as the "Seabees") and the Civil Engineering Corps. They include a breakwater at Apra, on Guam. Also piers and wharves for landing supplies at various places, using pontoons supported on 8-in. pipe piles and filled with coral and sand.

An outstanding accomplishment of the U. S. Navy was the design and construction of a large number of floating drydocks to accompany the fleets, so that battle damage could be repaired without sending or towing the ship to a distant port. They were of various sizes, the largest being capable of handling battleships, and built of steel, concrete, and wood. Parts of the sectional steel docks were built at inland plants, some as far inland as Pittsburgh. The docks or sections were towed to their destinations.

In Europe also, the U.S. Navy built landing

stages for supply ships and transports using groups of pontoons connected by Bailey demountable bridges. At Monrovia, in Liberia (west coast of Africa), an entirely new port was built, having facilities for large ships, and including a drydock, a quay wall 2,000 ft. long, and a rock breakwater.

Secret war ports established by both the United States and Great Britain were revealed in 1945. The former, in Excursion Inlet, Alaska, 950 miles north of Seattle, was put in service in 1942 but was abandoned and dismantled in 1945 as no longer needed. Two ports, with railway terminals and cargo-handling equipment, were established on the west coast of Scotland in 1940-42, when ports on Britain's east and south coasts were subject to submarine hazards. The Union of South Africa also established a secret port and naval base at Saldanha Bay, located on the west coast—100 miles from Cape Town.

Such commercial port facilities as marine and railway terminals, warehouses, transit sheds, docks, piers, shipyards, coal shipping plants, etc., are provided generally by private enterprise, more or less in cooperation with State and local authorities. A new Port Authority at Boston, Mass., is established under a State act which authorizes the sum of \$15,000,000 for modernizing the harbor, including railway terminals and freight facilities. Savannah, Georgia, plans port developments to cost \$5,000,000. At Houston, Texas, a bond issue of \$5,000,000 by the Houston Navigation District has been approved. Seattle has built a pier 1,020 ft. long and 400 ft. wide, with road and railway facilities and transit sheds. Cleveland, Ohio, has a new city department, the Office of Aviation and Port Development, in charge of port, railway and airport affairs. To protect the lake front at Cleveland from erosion, groins or jetties, composed of pre-cast concrete members, have been built. At Everett, Wash., extensive improvements are planned.

A coal and ore handling terminal in Maumee Bay, at Toledo, is a \$15,000,000 joint project of the Baltimore & Ohio and New York Central Railroads, which have had separate terminals 5 and 7 miles up the river, with access hampered by five drawbridges. On the other hand, two timber ore-shipping docks built for the U.S. Government at Escanaba, Mich., were abandoned and dismantled to provide timber urgently needed in war work. They were started in 1942 to provide for shipping ore from the Michigan mines in case of disablement of the canal at Sault Sainte Marie by enemy action or sabotage. There were to have been six of these docks.

The Mexican Government plans extensive improvements at Manzanillo, on the west coast. In Canada, shipment of iron ore from the new Steep Rock mine was begun from a concrete ore dock of the Canadian National Railways at Port Arthur, Ontario. The dock is 600 ft. long, with 50 pockets on each side, each pocket holding 300 tons. Four tracks are laid along the tops of the pockets, and ore is delivered by trains of 50-ton cars. A 276-ft. dry-dock of the cradle or marine-railway type, for vessels up to 2,500 tons, has been built at Victoria, B.C. At Sydney, New South Wales, the new concrete drydock for commercial and naval use was completed in 1945; it is 1,174 ft. long and 154 ft. wide, with 42 to 48 ft. of water on the sill. The Union of South Africa also completed its great drydock at Cape Town, 1,250 x 156 ft. with 48 ft. of water at high tide. Still another drydock, 750 ft. long and 110 ft. wide, is to be completed in 1946 at East London, South Africa. At Durban also,

there is a large new steel floating drydock, and extensive improvements are being made for liners, cargo vessels and warships, in expectation of post-war traffic. See **WATERWAYS**.

E. E. RUSSELL TRATMAN.

PORTUGAL. A republic of southwestern Europe. Capital, Lisbon.

Area and Population. Area, 35,490 square miles including the Azores and Madeira Islands. The population in 1940 was 7,722,152 including the Azores and Madeiras. Vital statistics (1943) births, 24.8 per 1,000; deaths, 15.3; infant mortality, 133 per 1,000 live births. Principal cities: Lisbon, about 800,000 inhabitants; Oporto, 262,309; Funchal, 48,493; Setubal, 35,071; Braza, 29,875; Evora, 21,851; Ponta Delgada, 21,071; Faro, 20,419; Coimbra, 20,216.

Defense. Military service is compulsory for men from 20 to 48 years of age, who serve for six years in the regular army. The total peacetime strength of the army is 3,200 officers and 27,000 enlisted men. There are also about 160,000 trained reserves. The navy consists of 7 sloops, 6 destroyers, 7 gunboats, 3 submarines and auxiliary vessels. Besides his army service, the Portuguese youth from 7 to 20 years gets military preparation in an organization named "Mocidade Portuguesa" modeled after the Fascist corps.

Education and Religion. According to the census of 1940, 67.8 percent of the nation was illiterate. Compulsory education has been in effect since 1911 and many measures have been introduced to decrease illiteracy. In 1939-40, the Government reported that more than half a million students received elementary instruction. There are 42 secondary schools and 4 universities. Freedom of worship exists, but the Roman Catholic faith prevails and plays an important role in the political, economic and social life of the nation (see below, **EVENTS**, 1945).

Economy and Finance. Agriculture is the leading occupation, followed in order of importance by fishing, mining and manufacturing. Estimated yields of the principal crops for 1945 do not differ from those of 1944 (see **YEAR BOOK** for 1944, p. 488) but the economy has suffered certain changes, according to the figures given by the National Statistical Institute.

The movement of trade for the year 1944 was as follows: imports, 3,836,000,000 escudos; exports, 3,095,000,000 escudos, showing an unfavorable balance of trade as compared with that of 1943.

Analysis of the trade movement by classes (in millions of escudos) is as follows: imports: livestock, 1.7; raw materials, 2,085.5; yarns, fabrics and accessories, 154.0; foodstuffs, 939.6; machines, apparatus, tools, etc., 258.0; various manufactures, 397.5. Exports: livestock, 16.9; raw materials, 805.9; yarns, fabrics and accessories, 432.4; foodstuffs, 1,371.2; machines, apparatus, tools, etc., 35.5; various manufactures, 432.8. Imports of wheat rose considerably because it was a bad year for agriculture. Exports decreased in value to the extent of 940 million escudos as compared with the previous year. Those products in which the decrease was most noticeable were resins, wolfram, tin, and tinned fish. Port wine, one of the principal exports, in 1944 reached the total of 180 million escudos, corresponding to 157,000 hectoliters, a figure far below the average (413,000 hectoliters) for the five years preceding the war (1934-38).

As a result of its strategic position and its neutrality, Portugal became one of Europe's most

important shipping centers. In 1944, she handled 485,000,000 escudos worth of merchandise in indirect transit, as compared with 322,000,000 in 1938. The amount of direct transit and trans-shipment merchandise amounted to 1,729,000,000 escudos in 1944 as compared with 92,000,000 in 1938. These transit figures are below the 1943 level, however, due to Portugal's loss of her trade with the Axis.

Transportation. There are 2,224 miles of railways. Highways and roads extend 15,357 miles. Eleven rivers are navigable. Portugal is one of Europe's most important shipping and air traffic centers. The merchant marine comprises about 800 ships.

Government. Portugal is governed as a Corporative State under the Constitution adopted on March 19, 1933. The organs of government are: a President or Chief of the State; a Premier or Chief of the Government, a Parliament composed of a Corporative Chamber and a National Assembly, a State Council, a Cabinet and the Judiciary.

The Chief of the State is elected every seven years. Voting is restricted to adult males who are able to read and write or who pay direct taxes to the State; to administrative corporations, and to adult females having a special secondary school or university diploma. The 99 members of the Corporative Chamber are appointed by local "autarchies" and administrative, moral, cultural, and economic institutions. The National Assembly of 90 members is elected for four years by the voters.

In the general elections of 1942, the only candidate in the running, General Antonio Oscar Frago de Carmona, who has held office since 1928, was reelected for another seven years, his term expiring on April 15, 1949.

The State Council is comprised of the President of the Republic (Chief of the State), the President of the Council of Ministers, the Vice-President of the National Assembly and Corporative Chamber, the President of the Supreme Court, the Attorney-General of the Republic and four other life members. The duties of this Council are to advise the President and to convoke or dissolve the National Assembly. The President appoints the Premier who, in turn, selects the Cabinet, but this body is not responsible to the President.

The only legal party is the União Nacional (Party of National Union) which supports the government. The opposition parties that tried to participate in the general elections of November, 1945, under the name of the United Democratic Movement, at the last moment instructed their members to abstain from voting (see below, **EVENTS**).

Events. The Portuguese Government became a dictatorship on May 28, 1926, after a military coup. Within a few days of their success, the leaders of the movement were disagreeing among themselves and as a solution to their problems, they selected General Frago de Carmona, who has the doubtful honor of being the Dean of European dictators, to head the new Government.

Soon afterwards, the Church succeeded in getting Antonio de Oliveira Salazar into the Government in the strategic post of Premier. In imitation of Mussolini's tactics, Salazar assumed control of the most important portfolios. He has always acted in accord with the Catholic Church and with his old schoolmate, Monsignor Cerejeira, who is one of Lisbon's most influential figures. To prevent any demonstration of opposition from the democratic parties, Oliveira Salazar resorted to the methods common among dictators: imprisonment and mass deportations to the Portuguese possessions in Africa and in the Pacific. All the liberally inclined mem-

bers of the army were discharged. During the first years of the dictatorship there were several revolts, but they were easily quelled. The last one occurred in August, 1936 when the crews of warships anchored in the Tagus River mutinied and tried to join the navy of Republican Spain.

Most of the liberal Portuguese are living in exile in Paris and London. For example, Jaime Cortesao, ex-director of the Lisbon National Library, and José Domingues dos Santos, who, in spite of his long absence, has a large following among his countrymen.

Portuguese labor has not let itself be assimilated by the dictatorship, which has made futile attempts to build up a corporative state based on vertical syndicates. On numerous occasions the workers, grouped in underground unions, have promoted strikes with political objectives, the most important one being the general strike of 1943 which for one week stopped all transportation in Lisbon and Oporto (see YEAR BOOK for 1944, p. 489).

1945 has been an uneasy year for Oliveira Salazar, as well as for his colleague Franco. Germany's defeat and the end of the Pacific war have made his regime increasingly less popular in other countries and in his own.

The dictator became seriously worried early in the year over unemployment and the poverty-stricken condition of the masses, which the Government attributed to the war. One paper, the official organ of the regime, stated in reference to this situation: "The problem of relief is an acute one with which all governments have to contend, here and everywhere. The sacrifices imposed by the war have lessened the economic resistance of many people." The "Winter Relief Fund" was organized and the government, strange to say, admitted that as wages were not adequate enough to permit the workers to contribute, they should work one extra hour daily and give the equivalent wage to the Fund.

In February, Portugal established diplomatic relations with the Provisional Government of France. Monsieur Jean du Sault was formally received in the Palace of Belém by President Carmona and Premier Salazar. De Gaulle's Government, forgetting Salazar's benevolent neutrality toward Germany at the beginning of the war, hastened to improve its relations with its neighbor, with whom it now shared the common goal of safeguarding a colonial empire. The new French Minister on every possible occasion recalled the "past" glories of Portugal, and the dictator felt pleased that he could officially place France next to his other great ally, the British Empire. Portugal and Great Britain have the oldest treaty of alliance in all Europe, dating back to 1373, by virtue of which (and when the war had taken a turn for the better) Salazar made important concessions to the cause of the United Nations (see YEAR BOOK for 1944, p. 489).

Toward the end of February, the "Diário da Manhã" published some interesting statements by President Carmona and Premier Salazar with reference to the country's international position. Both of them were anxious to explain to the United Nations the reasons for Portuguese neutrality. Carmona declared, "England has not asked us, in the name of our ancient alliance and friendship, to enter the conflict." But he was careful to add that, "Germany has informed us that she will respect Portugal's integrity and our overseas possessions if we remain neutral."

Conditions within Portugal remained during the first months of the year as they had during the final

months of the preceding one. In the capital and larger cities, the upper classes were enjoying the advantages of living in a neutral country whose economy was mobilized for war. The laboring classes and rural population, on the other hand, were feeling the pinch of inflation. The governing classes were interested in maintaining friendly relations with the Allies, especially with Great Britain, but their efforts in this direction did not prevent them from officially offering their condolences to the German Government on the occasion of Hitler's death. The British Ambassador in Lisbon, Sir Ronald Campbell, chose to ignore this fact and honored the Head of the State, General Carmona and the President of the Council, Dr. Oliveira Salazar with a banquet at which he expressed England's appreciation of Portuguese "neutrality." He spoke of the "glorious past and great future of the country, whose great qualities are personified in the Head of the State."

Domestic politics have been dominated by the government party, the União Nacional, which is the only legal party. The press remained in government hands, or was controlled by conservative concerns supporting the Government. The *Diário da Manhã* is Salazar's official paper. The *Diário da Lisboa*, *Diário de Notícias*, *Diário Popular* and the *Jornal de Comercio* are traditionally conservative. *Novidades* is the organ of the Catholic Church and *A Voz* expresses monarchist leanings. The only liberal newspaper is *A República* but its circulation declined under the pressure of strict government censorship.

Early in October, Portugal sustained a political shock. Salazar announced his intention of convoking the Parliament and holding elections by restricted suffrage. The importance of this announcement can not be overestimated, for the Portuguese people have been living for 20 years under a government in which they have had no voice whatsoever. The news brought about the reappearance of Republicanism. Two important liberal groups, "União Democrática" and "Esquerda Democrática," prepared themselves for the elections. *A República*, the liberal newspaper, increased its circulation from a mere 12,000 copies a day to 60,000. Even the Monarchists got ready for the great event and the *Diário Popular* actually defended the restoration, declaring itself in favor of the candidacy of Duarte Nuno de Braganza. The *Diário Popular* was suspended by the government.

The government was concerned over this demonstration of agitation which was stirring the country. The Minister of the Interior, Colonel Botelho Moniz, sent the police to "advise" the citizens to abstain from politics. The foreign correspondents noticed that censorship became more rigid.

The much-publicized elections offered by Salazar hardly provided representation of the people. The restricted suffrage proviso limited the number of voters to 943,000 and of these only 56 per cent went to the polls. The foreign correspondents declared that, "The election was signalized by the lack of incidents and apparently by the lack of interest. The opposition parties operating under the name of United Democratic Movement had no candidates and instructed their members to abstain from voting."

Salazar's regime is no more popular because of the elections. The democratic forces have declared that they will continue their passive resistance and that they "will not resort to force until all other means fail." The labor group states that it can call a general strike at any time, but so far nothing has been effected in this direction.

Portuguese Possessions. The Portuguese colonial empire in Africa, Asia and Oceania consists of:—

Colonies	Area Sq. Mi.	Population
<i>Possessions in Africa:</i>		
Cape Verde Islands (1940) ..	1,557	181,286
Guinea (1940) ..	13,944	351,089
Príncipe and S. Tomé Islands (1940) ..	384	60,490
Angola (1940) ..	481,226	3,738,010
Mozambique (1940) ..	297,654	5,081,266
<i>Possessions in Asia:</i>		
India (1936) ..	1,537	579,970
China: Macao, etc. (1940) ..	6	374,737
<i>Possessions in Oceania:</i>		
Timor (1940) ..	7,330	474,363
<i>Total</i> ..	803,638	10,830,844

According to the Colonial Act of 1930 which was included in the Constitution approved by plebiscite on March 19, 1933, the Portuguese colonies are under the control of the Metropolis. Each has a governor and enjoys financial and administrative autonomy. Their budgets must be approved by the Minister for the colonies and no colony is permitted to contract a public loan in a foreign country. The natives and the ownership of lands and cultivation are defended and protected by the State, which forbids the forced labor of natives except for public service, punishments or payment of taxes.

Portuguese India comprises Goa, Damán, and Diu. The capital is Panjim (Nova Goa). Chief products are: manganese (3,300 metric tons, 1940), coconuts, fish (fresh and salted), spices, cajunuts, salt and copra. In 1940 the imports by sea and land amounted to 104,933,000 escudos; the exports, to 19,646,000 escudos. There are some 51 miles of railways and 730 miles of roads. In 1938 there were 503 elementary schools, 12 secondary schools, a medical school and a teacher's training college. Public debt, January 1, 1943, 15,029,550 escudos. Governor General, Colonel José Ricardo Pereira Cabral.

Macao, in China, situated on an island of the same name at the mouth of the Canton River, forms, with the two small adjacent islands of Taipa and Colôane, a province. The city is divided into two wards, one inhabited by Chinese, and the other by non-Chinese, each having its own administrator. Of the total population in 1940, 8,989 were Portuguese. The trade of Macao, a free port, is mostly transit and is in the hands of the Chinese. Served principally by British, Japanese and Dutch steamship lines, 6,406 steamers of 3,111,571 gross tonnage, cleared the port in 1938. The budget in 1943: 41,275,760 escudos. The Governor, Commander Gabriel Mauricio Teixeira.

Portuguese Timor (occupied by the Japanese during February, 1942) consists of the eastern portion of the island of that name in the Malay Archipelago, with the territory of Ambeno and the neighboring islands of Pulo Cambing and Pulo Jako.

The capital Dili (Dilly or Dilli), with about 3,000 population, is the chief port. Principal exports are: coffee, sandal-wood, sandal-root, copra and wax. Imports (1940) were 3,880,000 escudos; exports, 4,154,000 escudos. Public revenue and expenditures were estimated for 1943 as balanced at 9,429,674 escudos (nominal value of the escudo was \$0.0412, Nov. 8, 1943). Public debt on Dec. 31, 1941, was 31,279,164 escudos. There is a good road system of 677 miles, telephone lines of 1,656 miles, and a wireless station at Dili. Governor: Captain Manuel de Abreu Ferreira de Carvalho.

For Portuguese possessions in Africa, see PORTUGUESE AFRICA.

MIGUEL JORRÍN.

PORTUGUESE AFRICA. This heading comprises five colonies along the west and southeast coasts of the continent. Not included are the Madeira Islands, which administratively are treated as an integral part of Portugal.

Cape Verde Islands. An archipelago of some fourteen islands lying off the coast of Senegal, with an area of 1,557 square miles and a population (1940) of 181,286 (the great majority of which are half-castes, with most of the remainder classified as Negroes). The colony is administered by a Governor, who resides at Praia. The islands' economy is rather primitive and figures very little in world trade. The principal products are sisal, castor oil, high-grade coffee, oranges, brandy, and hides. Porto Grande is an important fueling station for shipping on the routes from Europe to South America and Africa.

Portuguese Guinea. An enclave of territory bounded on all landward sides by French West Africa, with an area of 13,944 square miles and a population (1940) of 351,089 (of which over 98 percent are Negroes). The climate is quite unsuitable for white settlement. The colony produces some agricultural articles for export, such as palm oil and kernels, hides and peanuts, but its importance lies rather in its position near the bulge of Africa, where Pan American Airways found it convenient before the war to establish landing facilities on its transatlantic route. The seat of Government is at Bissau, which is also the colony's chief port: The former capital Bolama, is among the less important ports.

São Thomé and Príncipe. These two volcanic islands, lying in the Gulf of Guinea, are treated administratively as one unit, with a Governor residing in São Thomé. They have an area of 372 square miles and a population (1940) of 60,490 (of which 56,666 were Negroes). São Thomé is by far the larger and more important of the two, and also accounts for about nine-tenths of the total population. Its mountains rise to some 7,000 feet, the soil is fertile and there is abundant rainfall. Despite their small size the islands produce large amounts of cacao, as well as some coffee, copra, and palm oil. There is a considerable movement of seasonal labor back and forth between the islands and the near-by continent.

Angola (Portuguese West Africa). This important colony, largest in the Portuguese empire, has an area of 481,351 square miles and a population (1940) of 3,738,010, of which 44,083 were Europeans and 28,305 half-castes. The Negro population consists largely of Bantu stock still dwelling in a tribal state. The administration of the colony is headed by a Governor-General, assisted by an Advisory Council, the members of which are in part appointive and in part the elected representatives of certain economic organizations of the European inhabitants. Educational opportunities are restricted to less than 100 schools but are gradually improving.

Angola is generally regarded as one of the richer colonies in Africa—it was coveted by both the Nazi and Fascist regimes. Portugal has usually looked to Great Britain to help her defend the territorial integrity of her colonial empire. However, Angola's economic development is still only in the early stages. Among the principal exports are coffee, diamonds, sugar, and palm oil. On the interior plateau, which has a temperate climate, it

is hoped eventually to open up large areas to European settlers who will produce cotton, wheat, tobacco, and other exportable items. The principal railroad is the Benguela Railway, which runs from Lobito on the Atlantic Ocean through the Belgian Congo to Northern Rhodesia. The future capital, Nova Lisboa, is located along the plateau section of this railroad line. The present capital is the port city of São Paulo de Loanda, established in 1575.

Mozambique (Portuguese East Africa). Mozambique is the most populous of Portugal's possessions, with an area of 297,731 square miles and a population (1940) of 5,081,266—27,438 Europeans, 15,461 half-castes, 9,147 Indians, and 5,027,591 Negroes. The colony is administered by a Governor-General who is assisted by an Executive Council and by a Government Council comprising both officials and representatives elected by certain economic interests. Until 1942 the Companhia de Moçambique administered the territory of Manica and Sofala. Since then the state has been in direct control of the entire colony, which is divided into four provinces: Sul do Save, Manica and Sofala, Zambezia, and Niassa. The capital is at Lourenço Marques. Education is provided by some 700 primary schools, 48 professional schools and one high school.

Mozambique produces important quantities of sugar, corn, copra, sisal, cattle and other animals. A great deal of the foreign trade of the Transvaal and its rich Rand mining region passes through the port of Lourenço Marques over the Delagoa Bay Railway. In the same manner, the port of Beira is the outlet, over the Beira Railway, for a considerable part of the foreign trade of the Rhodesias. Beira is also connected by rail with the Nyasaland Protectorate. Along this latter route lies the lower Zambesi Bridge, 12,064 feet in length (said to be the longest bridge in the world). During 1942 over 1,400 ships entered the ports of Beira, Lourenço Marques, and Mozambique.

Events, 1945. In a decree dated April 21, 1945, the Portuguese Government provided for the reorganization of the health services in its colonies. The two primary objectives of this reorganization were to be: to protect, defend, and augment the native population wherever it may be, improving its sanitary conditions and its standard of living, to facilitate the adaptation of whites to tropical regions, whether by assisting individuals preventively or curatively, or by seeking to transform the environment. To attain these ends not only hospitals but numerous health centers and sanitary posts were to be established.

In June the Portuguese Minister of Colonies, Dr. Marcelo Caetano, witnessed the opening of a large and modernized new port at Loanda in Angola, which was said to be one of the best in Africa.

In Mozambique the Government introduced measures to increase the agricultural productivity and to promote the economic welfare of native farmers. At the same time the Government took steps to assist the process of industrialization, particularly the expansion of weaving mills. These were to be encouraged to supply the local market but not to interfere with the home industry of Portugal. In September a British concern, the Marconi Wireless Telegraph Company, revealed that it had contracted to install a complete system of radio communications in Mozambique. This scheme provided for the construction of twelve stations which when completed would give the colony "one of the most up-to-date and efficient radio telegraph and telephone systems in any colonial area."

The Portuguese Government announced in Au-

gust that troops which had been organized and trained in Mozambique were being sent to reoccupy the island of Timor which the Japanese had seized early in 1942.

Among the thirty-two new Cardinals announced by the Vatican on Dec. 23 was the Archbishop of Lourenço Marques, Teodosio Clemente de Gouveia, who upon being confirmed in his office would be the only member of the College of Cardinals from the whole continent of Africa.

ROBERT GALE WOOLBERT.

POSTAL RATES. Domestic mail, according to the *United States Official Postal Guide*, includes matter deposited in the mails for local delivery or for delivery from one place to another within the U.S., and is divided into four classes. First-class mail includes written matter, matter sealed against inspection, postal cards, and private mailing cards. Second-class includes newspapers and periodical publications. Third-class includes merchandise, printed matter, and other mailable matter not greater than 8 oz. in weight. Fourth-class (parcel post) includes merchandise, printed matter, and other mailable matter exceeding 8 oz. in weight.

Rates of Postage on First-Class Mail. Written and sealed matter in general is 3 cents for each ounce or for each fraction of an ounce. Postal cards are 1 cent each. Private mailing cards (post cards) which meet the requirements for such cards are 1 cent each. "Drop letters" and other first-class matter are 1 cent for each ounce or for each fraction of an ounce, provided that they are mailed at offices where letter-carrier service has not been established and that the addressees are not served by rural or star-route carriers. Letters, bills, statements, etc., prepared in the central office of a company rendering service in places other than its central location, are eligible for local delivery in such places provided that the postage on each piece of mail is prepaid at the local rate. Letters received under cover, with postage paid on the bulk package at the letter rate, are acceptable for local delivery only if each letter is prepaid at the first-class rate. The charge for business reply cards and for letters in business reply envelopes is the regular rate plus 1 cent. A letter returned to the sender must be mailed in a fresh envelope with the proper postage. The limit of weight for first-class mail is 70 lb.

Air Mail Rates. The domestic rates for air mail include all available transportation by air. A rate of 8 cents per ounce applies to deliveries from one post office to another on the mainland of the U.S., including Alaska, from one to another in the Hawaiian Islands, in Puerto Rico, in the Virgin Islands of the U.S., and between the Virgin Islands and Puerto Rico, but not between the mainland and any of these islands. A rate of 6 cents applies to mail to members of the armed forces outside the continental U.S., including civilian employees who receive mail through Army and Navy post offices overseas. Air mail which is to be sent through the domestic mails and across the Pacific Ocean by steamer should be endorsed "Via Air Mail except over the Pacific." Other rates, cents per half-ounce, are as follows:

Canal Zone	10	Philippine Islands.....	50
Canton Island	25	Puerto Rico.....	8
Guam	35	Virgin Islands of the	
Hawaii	15	U.S.	8

International Air Mail. The postage rates for air mail from the U.S. to various foreign countries are listed in the table on page 470.

INTERNATIONAL AIR MAIL POSTAGE RATES
[U.S. cents per half-ounce]

Aden	70¢	Italian Somaliland	70¢
Afghanistan	70¢	Ivory Coast	50¢
Albania	30¢	Jamaica	10¢
Algeria	33¢	Kenya	60¢
Anglo-Egyptian Sudan	70¢	Latvia	30¢
Angola	60¢	Lebanon (Rep.)	70¢
Anguilla	10¢	Liberia	50¢
Antigua	10¢	Libya	33¢
Argentina	20¢	Lithuania	30¢
Aruba	10¢	Luxembourg	30¢
Ascension Island	30¢	Madagascar	30¢
Australia	70¢	Madeira Islands	30¢
Asores	30¢	Malta	70¢
Bahamas	10¢	Manchuria	70¢
Bahrain Islands	70¢	Martinique	10¢
Baluchistan	70¢	Mauritania	45¢
Barbados	10¢	Mauritius	60¢
Barbuda	10¢	Mexico	8¢
Belgian Congo	60¢	Midway Island	30¢
Belgium	30¢	Montserrat	10¢
Bermuda	10¢	Morocco	33¢
Bolivia	20¢	Mosambique	60¢
Bonaire	10¢	Netherlands	30¢
Brasil	20¢	Netherlands Indies	70¢
British Cameroons	60¢	(limit 1 oz.)	10¢
British Guiana	15¢	Nevis	10¢
British Honduras	10¢	New Caledonia	40¢
British Somaliland	70¢	Newfoundland	15¢
British Virgin Islands	10¢	(incl. Labrador)	50¢
Canal Zone	10¢	New Zealand	10¢
Canary Islands	40¢	Nicaragua	45¢
Canton Island	25¢	Niger	50¢
Cape Verde Islands	55¢	Nigeria	30¢
Ceylon	70¢	Northern Ireland	60¢
Chile	20¢	Northern Rhodesia	60¢
China	70¢	Norway	60¢
Colombia	15¢	Nyasaland	70¢
Corisca	33¢	Palestine	10¢
Costa Rica	10¢	Panama	20¢
Cuba	8¢	Paraguay	15¢
Curaçao	10¢	Peru	50¢
Cyprus	70¢	Philippine Islands	30¢
Czechoslovakia	30¢	Poland	30¢
Dahomey	45¢	Portugal	60¢
Dansig	30¢	Portuguese East Afr.	50¢
Denmark	30¢	Portuguese Guinea	8¢
Dodecanese Islands	30¢	Puerto Rico	10¢
Dominica	10¢	Redonda	30¢
Dominican Republic	10¢	Reunion Island	40¢
Ecuador	15¢	Rio de Oro	10¢
Egypt	70¢	Saba	10¢
England (and Wales)	30¢	St. Christopher	10¢
Eritrea	70¢	St. Eustatius	10¢
Estonia	30¢	St. Helena	30¢
Ethiopia	70¢	St. Kitts	10¢
Falkland Islands	20¢	St. Lucia	10¢
Fiji	40¢	St. Martin	10¢
Finland	30¢	St. Vincent	10¢
Faeroe Islands	30¢	Salvador (El)	70¢
France	30¢	Saudi Arabia	30¢
French Cameroons	60¢	Scotland	45¢
French Equatorial Afr.	60¢	Senegal	50¢
French Guiana	15¢	Sierra Leone	60¢
French Guinea	50¢	Southern Rhodesia	60¢
French Somaliland	70¢	Southwest Africa	30¢
French Sudan	50¢	Spain	50¢
French Togoland	45¢	Spanish Guinea	15¢
Gambia	50¢	Surinam	30¢
Gibraltar	30¢	Sweden	30¢
Gold Coast Colony	50¢	Switzerland	70¢
Greece	30¢	Syria	60¢
Grenada	10¢	Tanganyika	70¢
Grenadines	10¢	Tibet	70¢
Guadaloupe	10¢	Trans-Jordan	10¢
Guam	35¢	Tunisia	33¢
Guatemala	10¢	Turkey	70¢
Haiti	10¢	Turks Island	10¢
Hawaii	15¢	Uganda	60¢
Honduras (Rep.)	10¢	Union of South Africa	60¢
Hungary	30¢	Uruguay	20¢
Iceland	30¢	U.S.S.R.	30¢
India	70¢	Vatican City State	15¢
Iran	70¢	Venezuela	8¢
Iraq	70¢	Virgin Islands (U. S.)	30¢
Ireland	30¢	Yugoslavia	30¢
Italy	30¢	Zanzibar (incl. Pemba)	60¢

master General July 1, succeeding Frank C. Walker of Pennsylvania.

The year saw an increase in the volume of mail from 34,500,000 pieces to 38,000,000,000. This mail was handled at a time when 56,000 experienced employees were serving in the armed forces. Revenues for the fiscal year which ended June 30, 1945, rose from \$1,112,000,000 to \$1,314,000,000. Accrued expenditures were approximately \$1,151,000,000. The year's surplus was \$162,642,089. Total financial transactions—including postal savings, war bond sales, revenues, expenditures, etc., increased from \$16,000,000,000 to \$17,000,000,000. There were in operation 41,395 post offices and 447,000 persons were employed, exclusive of contract workers.

Geared primarily to the needs of war during the first eight months of the year, the Postal Establishment sought to put back into force full peacetime service as rapidly as possible. The temporary rate of 8 cents an ounce on domestic air mail was scheduled to revert to 6 cents six months after the termination of hostilities, and studies of possibilities of more widespread use of air transportation for the mail were made.

ROBERT E. HANNEGAN.

POWER, Division of. A division of the U.S. Department of the Interior which coordinates the power phases of the various bureaus of the department. During the war most of its efforts were aimed at meeting the power requirements of the war program. Director: Arthur E. Goldschmidt.

PRESBYTERIANS. A religious connection adhering to a system of church government by presbyters or elders and having some 60,000,000 members throughout the world. In the United States there are ten Presbyterian bodies, the largest of which follow.

Presbyterian Church in the United States of America. The largest body of the Presbyterian communion, represented by churches in every State of the Union and having official mission stations in Alaska, Cuba, Puerto Rico, and 16 foreign lands. In 1945 its churches in the United States and abroad were organized into 40 synods and 268 presbyteries. Statistics for the year ended Mar. 31, 1945, showed a total communicant membership in full standing of 2,161,872, the largest number in the history of the Church. The known adherents number approximately 5,000,000. The Sunday school enrollment was 1,257,454. The number of churches was 8,604 and of ordained ministers 9,519. Contributions during the year amounted to \$59,669,015, of which \$49,020,112 was for current expenses and the remainder for benevolences. The Board of National Missions received \$2,995,079; the Board of Foreign Missions, \$2,815,951; the Board of Christian Education, \$907,639; and the Board of Pensions, \$202,332. The Church maintains 48 colleges and 10 theological seminaries. It published three national official periodicals, *Monday Morning, Everyone, and Women and Missions*.

The 157th annual General Assembly was held at Minneapolis, Minn., May 24-30, 1945. The Reverend William B. Lampe, D.D., LL.D., pastor of West Presbyterian Church, St. Louis, Mo., was elected Moderator. The Assembly authorized the raising within three years of a \$27,000,000 fund for postwar reconstruction and rehabilitation of the Church in the United States, in Europe, and in foreign missionary fields. It declared its support of full membership by the United States in the United Nations Organization, and urged the Unit-

POST OFFICE, U.S. As mail volumes rose to an unparalleled height, the Postal Service moved to re-establish its activities on a peacetime basis and to take advantage of improved transportation media.

Robert E. Hannegan of Missouri became Post-

ed States Government to promote, through that international organization, "equality of rights and opportunities among the member states," observance of "human rights and fundamental freedoms by all nations toward all peoples," reeducation of the German and Japanese people, and "reconciliation between victor and vanquished." Approval was given also to a report indicating continued progress toward organic union between the Presbyterian Church in the United States of America and the Presbyterian Church in the United States (Southern) and also the Protestant Episcopal Church. The Church has its headquarters in the Witherspoon Building, Philadelphia 7, Pa., in charge of the Rev. William Barrow Pugh, D.D., LL.D., Stated Clerk.

The Presbyterian Church in the United States (South). The division of the Presbyterian denomination which covers the territory commonly known as the Southern States. It was composed in 1945 of 17 synods (in most cases, corresponding to state lines) and 87 presbyteries, with 3,513 organized churches, 2,586 ministers and 580,369 members, exclusive of ministers. During the year 20,714 members were received on profession of faith, and 25,954 by certificate. There were 12,035 adult baptisms and 9,559 infant baptisms. The ruling elders numbered 18,659, and deacons 22,112. Contributions for current expenses during the year amounted to \$5,721,307, for pastors' salaries \$3,811,606, for building expenses \$3,443,950, and for benevolences \$5,656,925; a grand total of \$18,633,788, an increase over the preceding year of more than \$2,600,000. The total per capita gift was \$32.10, of which \$9.74 was for benevolences and \$22.36 for current expenses.

The 85th General Assembly of the Church convened in Montreat, N.C., 24 May, 1945, with 365 commissioners present. Rev. Thomas K. Young, D.D., pastor of the Idlewild Presbyterian Church, Memphis, Tenn., was elected moderator. Actions taken by the General Assembly of special interest are as follows: The Committee on Cooperation and Union was instructed to continue "to explore and search in suitable ways and means of bringing into one body all branches of our Presbyterian family"; specifically to "endeavor to perfect as soon as practicable the plan for reunion of the Presbyterian Church in the United States of America and the Presbyterian Church in the United States"—Overtures asking that the General Assembly withdraw from the Federal Council of Churches of Christ in America were answered in the negative. A goal of 50,000 won to Christ on profession of faith during the year was adopted enthusiastically. Much impetus was given to the work of the Committee on Radio by fixing a budget of \$30,000.00 and by the approval of efforts to extend the Presbyterian Hour over a live voice network which would cover the territory occupied by the Church.

This Church continues to go beyond its quota of Chaplains in the Armed Forces with 151 in the Army and 119 in the Navy. This total is more than 10% of all ministers in the Church and 13% of all in active service.

Plans are being made for the rehabilitation of the Foreign Mission work in the Orient. All of the fields of this Church were affected by the war because stations in Japan, Korea, and China were overrun by the Japanese.

Training of recruits for the Ministry and Lay service is conducted in the four Theological Seminaries and the Training School for Lay Workers. Thirteen colleges controlled by synods and two affiliated colleges provide a Christian education

for young men and women, who will be the future leaders of the Church. Seven Junior Colleges, eight secondary schools and three mission schools (one for Indians and two for Mexicans) continue to render splendid service. Sixteen Orphans' Homes and Schools take care of the bodily, mental and spiritual needs of more than 1,600 children.

The 1946 meeting of the General Assembly will convene in Montreat, N.C., on 23 May.

United Presbyterian Church of North America. A member of the family of Presbyterian Churches, of Secession and Covenanter origin, formed by the Union in Pittsburgh, Pa., May 26, 1858, of the Associate and Associate Reformed Churches. The General Assembly of the Church convened in Monmouth College, Monmouth, Ill., May 30, 1945. The membership of the church is 198,759 in America and 68,705 in Egypt and India. The contributions in America averaged \$31.35 per member for the year. The Moderator of the General Assembly is Rev. James M. Ferguson, D.D., Pittsburgh, Pa. The Clerk of the General Assembly is Rev. O. H. Milligan, D.D., LL.D., Pittsburgh, Pa.

Cumberland Presbyterian Church. One of the Presbyterian bodies whose chief strength is in the Southern States. It differs from most Presbyterian denominations on the theological doctrine of fatalism. The 1945 statistical report shows: 1,063 churches; 752 ministers; total membership of 70,567. There was a membership gain over last year of 6,350. A General Assembly which meets annually is the supreme judiciary, the 1945 meeting was held in Lewisburg, Tennessee, May 31–June 5, 1945. Rev. S. T. Byars of Rogersville, Alabama, was Moderator, and the Rev. Wayne Wiman of Nashville, Tennessee, was Stated Clerk, Treasurer, and General Secretary.

PRICE ADMINISTRATION, Office of (OPA). The purposes of the Office of Price Administration as enumerated in the Act which created it are: to stabilize prices and to prevent speculative, unwarranted, and abnormal increases in prices and rents; to eliminate and prevent profiteering, hoarding, manipulation, speculation, and other disruptive practices resulting from abnormal market conditions or scarcities caused by or contributing to the national emergency; to assure that defense appropriations are not dissipated by excessive prices; to protect persons with relatively fixed and limited incomes, consumers, wage earners, investors, and persons dependent on life insurance, annuities, and pensions from undue impairment of their standard of living; to prevent hardships to persons engaged in business, to schools, universities, and other institutions, and to the Federal, State, and local governments which would result from abnormal increases in prices; to assist in securing adequate production of commodities and facilities; to prevent a post-emergency collapse of values; to stabilize agricultural prices in the manner provided in section 3 of the Price Control Act; and to permit voluntary cooperation between the Government and producers, processors, and others to accomplish the aforesaid purposes.

In June 1945, a joint resolution of Congress extended the effective period of the Emergency Price Control and Stabilization Acts of 1942, as amended, until June 30, 1946, with only minor changes, principally concerning OPA regulations on meat pricing and distribution.

The agency programs for the control of prices and rents and the rationing of consumer goods were continued throughout 1945. Prior to V-J Day virtually the whole price structure was under con-

trol; the major exceptions were a few agricultural commodities, control over which is legally prohibited until prices reach certain levels, and combat equipment. Control was administered through the General Maximum Price Regulation and 574 individual price regulations (as of Dec. 31, 1945). After V-J Day, OPA was confronted not only with the task of continuing to hold prices steady but of seeing that price ceilings would not impede production of goods essential to a sound peacetime economy, and at the same time preparing for orderly relaxation of controls.

The success of OPA in preventing inflation through the war period may be measured by the fact that, despite difficulties encountered with some cost-of-living components such as clothing and housefurnishings, the Bureau of Labor Statistics' Consumers' Price Index (formerly known as the Cost-of-Living Index) moved up only 2.3 percent during the calendar year of 1945. From May 1943, when the rise in the cost of living was halted under President Roosevelt's hold-the-line order, through December 1945, OPA held the consumer price level to a mere 3.8 percent rise. The total rise in the consumers' price index from August 1939 through December 1945 was 31.7 percent, most of which occurred before May 1942, when OPA instituted price control at retail under the General Maximum Price Regulation. Another measure of the success of the price control program is to compare these figures with similar ones for World War I. Between July 1914 and November 1918, the cost of living rose 61.8 percent, and by July 1920 (the period corresponding to the duration of World War II), the cost of living had risen 107.5 percent above the July 1914 level. The peak increase of 108.4 percent had been reached in the previous month, and by July the devastating decline had already begun which was to carry us into one of our worst depressions.

Similar comparisons may be made with regard to the wholesale prices of industrial commodities (farm and food prices being excluded). Their total rise between August 1939 and November 1945 was 25.1 percent. Between May 1943 and November 1945, however, the rise was held to 3.6 percent. During the first 11 months of 1945, these prices rose 1.3 percent. By Armistice Day, 1918, industrial prices had risen 97.7 percent and by July 1920, they had reached 163.9 percent above pre-war levels.

OPA's contribution to price stabilization during 1945 was accomplished largely through vigorous enforcement of the regulations. The policy of simplifying the regulations, wherever possible, to facilitate compliance was continued during the year, as was the policy of decentralization with more and more authority being delegated to field offices to act on price and rationing matters within the broad policy limitations set down by the National Office. No little part in the task of stabilization was played by the representatives of various economic and industrial groups on the policy advisory committees set up by OPA.

A Consumer Advisory Committee in the national office provides a channel through which consumers can present their problems and can suggest methods of obtaining clearer understanding of regulations and better compliance. About 50 such committees were in existence in OPA district offices during 1945.

Agricultural advisory committees were established throughout the country in order to bring closer together the viewpoints of the office and 7 million farmers. There were 50 such committees.

The Labor Policy Committee in the national office is composed of representatives of the American Federation of Labor, the Congress of Industrial Organizations, and the railroad brotherhoods. In addition there is a regional labor advisory committee in Cleveland, Ohio, and 107 district committees are scattered throughout the country. Serving on these committees were almost 1,500 labor people.

The industry advisory committees, setting up of which are mandatory under the law, bring to OPA problems the knowledge and experience of business and industry. They advise on drafting, administering, and simplifying regulations. During 1945, 621 such committees were active, 122 of which were set up during the year. More than 7,500 representatives of industry served on these committees.

The establishment of national industry advisory committees for rent control was made mandatory by Congress in June 1945. Three such committees were set up before the end of the year, for hotels, housing, and motor courts. There were no local committees.

Post V-J Day Problems. OPA's plans for the immediate postwar period implemented the President's Executive Order 9599. This order charged the Price Administrator with taking all necessary steps to assure that the cost of living and the general level of prices would not rise, and with making such adjustments in existing price controls as were necessary to remove gross inequities or to correct maladjustments or inequities which would interfere with the effective transition to a peacetime economy. The Administrator was further directed "so far as is reasonable, practicable, and necessary for this purpose" to see that such price increases did not cause price increases at later levels of production or distribution, and, in those fields where price control had hitherto been insufficiently effective, to improve and tighten controls for those commodities which were important to production costs or to the cost of living. At the same time, the Administrator was directed to remove controls as rapidly as possible without endangering the stability of the economy.

The new pricing program covered both entire reconverting industries and individual manufacturers, as well as certain firms whose production had been greatly curtailed during 1944. Basic reconversion policy had the twin objectives of preventing inflation and at the same time encouraging maximum production and full employment. The general plan was to institute a broad-scale review of the prospective adequacy of existing ceilings in all important reconversion industries, to set up procedures for calculating individual adjustments under as simple a method as possible, to extend widely dollar-and-cent pricing with retail ceilings pre-ticketed at the manufacturing level, and, insofar as possible, keep consumer prices close to 1942 ceilings.

The special pricing formula for reconverting industries worked out in the spring of 1945 took into account the legal increases in the price of materials and in the basic wage rate schedules of factory employees occurring since 1941, when such items as automobiles, washing machines, vacuum cleaners, and other consumer durable goods were last on the market, and allowed for the same profit margins before taxes as during 1936-39, a "normal" peacetime period. This formula did not attempt to take into account all the factors which had affected production costs since 1941. It ignored some factors which temporarily increased costs, such as dislocation of supply, less efficient labor, payment of

overtime rates and shift differentials; but it similarly ignored factors which had decreased costs, such as the unprecedented ease of selling and the effect of technological progress achieved in many industries during the war period. To speed pricing under this formula, OPA issued industry-wide price increase factors which each manufacturer in the industry might use in calculating his own reconversion ceiling.

A companion program was designed to give reconverting firms individual price adjustments in situations where industry-wide adjustments were not suitable. To accelerate action, authority was delegated to OPA field offices to handle more than 90 percent of the applications of individual adjustments.

Another virtually automatic pricing method was provided for all reconverting firms expecting gross annual sales of less than \$200,000, with proposed ceilings becoming effective if not vetoed in 15 days. About two-thirds of all reconverting firms were thus provided for. These firms could add to their 1941 costs of a product, adjusted for legal increases in their own materials prices and straight-time wage rates, their own 1936-39 profit margin, or one-half the industry's margin. Where sales volume was under \$50,000 a year, the formula was still simpler, for the firm was allowed to estimate current costs of making the product and to add one-half the industry's profit margin, or its own margin for the first calendar year for which it had profit-and-loss information during 1939-41.

Price relief for larger reconverting firms was provided when they could show that their 1941 costs, adjusted for legally increased materials costs and basic wage rate schedules, were higher than current ceilings.

The OPA also undertook during this period to facilitate ceiling price adjustments for manufacturers who had maintained production of prewar goods throughout the war. Many of these manufacturers had not qualified for price increases under OPA war policies. Prior to V-J Day, industry-wide increases not required by law were granted to stimulate or maintain production of a particular commodity needed for the prosecution of the war or for civilian needs. Individual adjustments, permitted on the same basis, had been granted primarily to the out-of-line low-priced seller, in order to assure his production. No adjustments to relieve individual hardship in any and all cases were provided for, since such a practice might have led to diversion of short materials and manpower from essential wartime work. During the reconversion period, however, the problems of these non-reconverting manufacturers were provided for in a "general rescue" order which applied to companies that were losing money on over-all operations, and assured them all costs of production and distribution, though new prices might be higher than for the industry as a whole.

Another step to speed transition to a peacetime economy was to remove controls as fast as the situation warranted. A large number of items freed from control during the last months of the year were unimportant as living or business costs, or were already selling below ceiling prices. In general, the policy adopted was to drop price control over a particular commodity as soon as it appeared likely that balanced demand and supply would keep prices stable. For most commodities, the heavy inflationary pressures on prices made de-control impracticable during the year, even after V-J Day. The large accumulation of liquid savings, the abnormal volume of currency in circulation,

and the magnitude of government spending, along with the huge backlog of unsatisfied consumer demand made it too dangerous to the stabilization program safely to scrap controls, except for a minor number of commodities. The Price Administrator emphasized that if the national economy were to remain stabilized, rapid de-control was not possible, and that if the nation were to avoid the inflationary spiral and the consequent economic collapse that followed after World War I, the Office must continue to be vigilant in controlling prices, especially in fields like food, clothing, reconversion consumer goods, building materials, and residential rentals.

The close of the war brought no relaxation in controls over residential rents. OPA announced it would lift controls area by area as pressures against rent ceilings abated, but that continued vigilance was necessary to prevent inflationary rises in rentals in areas where pressures still existed. Under this selective policy, control was withdrawn from a number of areas or portions of areas where decline or ending of war activities, including the closing of camps, training schools, and air fields, had resulted in housing vacancies which removed pressures on rents. At the same time eviction rules were strengthened to protect tenants from being forced from their homes in crowded areas where there were few or no vacancies in the price range they could afford. From the consumer point of view, OPA's rent control program had been highly successful, for the Bureau of Labor Statistics' Consumers' Price Index showed that rents had remained at the same level throughout the 12 months of 1945, had declined 1½ percent since May, 1942, and had risen less than 4 percent since the beginning of the war in Europe.

In the field of rationing, reduced military demand, releasing large stores of supplies to the civilian population, made it possible for OPA to end its rationing programs for all but sugar and rubber tires before the close of November. Effective at midnight, December 31, tires were also released from rationing, leaving sugar as the sole commodity still subject to ration control. Rationing of processed foods, gasoline, fuel oil, and stoves was terminated immediately after the Japanese surrender, and rubber footwear, canned milk and cheese, automobiles, shoes, and meats, fats and oils in the following two months.

The end of most rationing and the lifting of some price controls enabled OPA to tighten its administrative organization. By the end of the year, the number of paid employees had been reduced to 37,729, compared with a peak of 63,428 in July, 1945; the number of district offices had been reduced to 64 from 93; and the number of local war price and rationing boards had been cut to about 1,900 from 5,600. The cut in local boards also freed a large number of citizens who had voluntarily contributed their time and effort throughout the war and whose outstanding work made possible OPA achievement.

Chester Bowles, who had been Price Administrator since November 1943, remained in that office throughout 1945.

History. The Office of Price Administration was created April 11, 1941, by Executive Order of the President, and was first known as the Office of Price Administration and Civilian Supply. It took over the price stabilization and consumer protection work started by the Advisory Commission to the Council of National Defense, the initial organization set up to direct the nation's armament program (see YEAR BOOKS for 1941, 1942, 1943,

and 1944). The Executive Order directed the price agency to take "all lawful steps necessary or appropriate in order to prevent price spiralling, rising costs of living, profiteering, and inflation resulting from market conditions caused by the diversion of large segments of the nation's resources to the defense program, by interruption to normal sources of supply, or by other influences growing out of the emergency."

The Price Stabilization Division of the National Defense Advisory Commission issued the first maximum price schedule, Feb. 17, 1941, covering second-hand machine tools, prices of which were threatening to skyrocket under war demand. Price schedules for aluminum scrap and secondary aluminum ingot, zinc scrap, and secondary zinc scrap, iron and steel scrap, and other important war materials followed. The creation of the Office of Price Administration and Civilian Supply (which became the Office of Price Administration in the Office for Emergency Management, August 1941) greatly strengthened the authority to issue and enforce maximum price schedules. The Office, by delegation of executive authority, possessed all the powers that had been available to the Price Fixing Committee of the War Industries Board in 1917-18. There was, however, one defect in the Office's power—there were no direct penalties for violations of price schedules. This was corrected on January 30, 1942, when the President signed the Emergency Price Control Act of 1942. The Act, for the first time, gave the Office of Price Administration statutory power, defining its duties to control prices and rents and providing it with specific means to punish violators. Leon Henderson, who had directed price control operations from the start, became the first OPA Administrator. Provided with statutory power and authority to enforce its orders, the Office reissued most of the existing "price schedules," of which there were close to 100, as "regulations" within the meaning of the Act.

On April 28, 1942, OPA issued its General Maximum Price Regulation, which set the highest prices charged in the month of March 1942 as the ceiling prices for virtually everything the American family wears or uses, and for around 60 percent of all foods. On May 11, 1942, the new ceilings became effective at the manufacturers' and wholesalers' levels, and one week later, on May 18, 1942, at the retail level, carrying price control into every store and shop throughout the nation. By the end of April 1942, 323 defense-rental areas had been designated in localities where inflationary rises were appearing. The general practice was to establish as a ceiling for an area the actual rent charged as of the date when the beginning of an inflationary advance was noted. In four-fifths of the areas designated by the end of April, rents were frozen as of March 1, 1942.

The basic weakness in price control after the General Maximum Price Regulation had gone into effect was that it provided ceilings for only 60 percent of foods, due to limitations of the Emergency Price Control Act of 1942. As a result, the cost of living continued to advance, due almost entirely to rises in the prices of uncontrolled foods. Between May and September 1942, foods controlled by GMPR advanced only three-tenths of one percent. In the same period uncontrolled foods advanced 10 percent, and the increase was translated into a 1.6 percent increase in the cost of living. To halt this uptrend, Congress passed the Stabilization Act of 1942, amending the earlier statute, which was approved by the President October 2, 1942. With

this new enabling legislation, price control was extended to provide retail ceilings for 90 percent of all foods. Toward the end of 1942, OPA issued an increasing number of dollar-and-cent maximum prices to replace the "freeze date" prices of the General Maximum Price Regulation or the "formula" maximums which had to be calculated by the seller on the basis of costs.

In the following years, the OPA continued its policy of transferring commodities from the General Maximum Price Regulation to specific regulations and of increasing use of dollar-and-cent prices, thus making the problem of enforcement less difficult. (For the different types of ceiling prices, see YEAR BOOK for 1943.) Compliance with these ceilings was made more effective through the Community Price Program, under which uniform retail prices for most standard groceries are published at regular intervals.

During 1944, controls were extended, particularly in the field of fresh fruits and vegetables, to distribution levels which were formerly uncontrolled. A nation-wide restaurant regulation became effective July 31, 1944. For more than a year previously restaurants had been controlled by regional orders, but the resulting lack of uniformity made compliance difficult. Institution of the national regulation was approved by representatives of the restaurant industry.

Adjustable pricing provisions were inserted in many regulations during 1944 and 1945. These permitted sellers to make sales and deliveries at current maximum prices subject to adjustment upward or downward in accordance with maximum prices subsequently established. This was done to facilitate distribution of commodities during periods when revised price ceilings were being discussed.

The delegation of authority to OPA to ration items made scarce by the war was first made experimentally on December 27, 1941, when hostilities in the Pacific choked off rubber imports from the Far East, and it became clear that automobile tires would have to be equitably distributed to essential users. This rationing authority was generalized and made permanent by Directive No. 1 of the War Production Board, issued January 27, 1942.

Under the general rationing arrangement, the War Production Board determined the quantity of scarce commodities available for civilian consumption except in the case of foods, where the determination was made by the War Food Administration, and in the case of petroleum, where the determination was made by the Petroleum Administration for War. Directives to ration foods were issued to OPA by the WFA, and by WPB as to other commodities. These directives were issued if the supply of a commodity available for civilian use was so limited that it could not be fairly distributed through the usual trade channels.

Tires, automobiles, and typewriters were among the first commodities upon which the impact of war was felt. They were rationed by certificate, as were bicycles. But by the end of 1942, the use of coupon books in rationing was well established. War Ration Book One, put in use in May, 1942, first provided coupons for sugar, then also for coffee. A separate coupon book was issued for gasoline, and coupon sheets were issued for fuel oil.

Point rationing was started early in 1943, with War Ration Book Two for meats and processed foods. War Ration Books Three and Four included point coupons for meats and other commodities. Book Three was distributed by mail June 15—

July 15, 1943, and Book Four through individual registration in October, 1943.

Dates upon which rationing of various products began were: 1942—new tires and tubes, January 5; recapped and recapping tires, February 19; new automobiles, March 2; typewriters, March 13; sugar, April 28; gasoline in 17 Eastern States, May 15; nation-wide mileage rationing, December 1, 1942; bicycles, July 9; rubber footwear, September 29; fuel oil, October 1; coffee, November 29 (released July 1, 1943); coal and oil heating stoves for private dwellings in 30 States, December 18 (nation-wide August 24, 1943). 1943—shoes, February 7; processed foods, March 1; meats, fish, fats, oils, cheese, March 29; canned milk and soft cheeses, June 30; solid fuels in Pacific Northwest, September 20; jellies and preserves, October 31.

OPA conducted a thorough campaign during 1944 and early 1945 to beat the gasoline black market. To reduce thefts from ration boards, central issuing points for coupon distribution were started in a number of cities, and security sites were established throughout the country. Under this procedure coupons were kept under regular banking conditions with necessary safety precautions. Local war price and rationing boards kept only a small store of coupons on hand for emergency purposes. Verification centers were also set up in each region to check ration coupons turned in, to test them for counterfeiting, and finally to see that they would be destroyed completely to prevent their getting into circulation again. In addition, regulations were tightened up to prevent legitimate coupons from reaching black market operators.

The mailing and verification centers were used also to handle other ration currency besides gasoline coupons.

The termination of the gasoline rationing program after V-J Day saw the sudden end of the traffic in illegal coupons and closed the problem of shutting off the flow of counterfeit and stolen gasoline ration coupons. A measure of the effectiveness of this work, as an important part of the well-rounded anti-gasoline black market program of the Office, is to be found in the figures disclosing the total nation-wide circulation of counterfeit gasoline coupons. In November and December of 1944, when the first complete figures became available, the circulation of counterfeits averaged 5,539,647 gallons per month. In July, 1945, the last month of complete figures, the circulation of counterfeits had dropped almost 94 percent to 362,118 gallons, culminating a steady decline in circulation from the end of 1944. The gasoline counterfeit problem had thus been virtually liquidated before the end of rationing.

The extreme shortage of meats during the early months of 1945 led to a meat black market of serious proportions, with counterfeit red stamps widespread. The currency verification centers were useful in attacking this problem also, and an intensive enforcement campaign was carried on which led to numerous arrests and criminal prosecutions both of traffickers in coupons and of business purchasers and users of illegal coupons. The Department of Justice promised immediate and vigorous prosecution of all black market cases, followed by substantial jail sentences.

Except for sugar, all OPA rationing operations ceased by the end of 1945. Removals from control after V-E Day were as follows: New and used 1942 automobiles (July); all stoves, gasoline and fuel oil, processed foods, farm implement and industrial tires (August); firewood and coal in Pacific

Northwest, rubber footwear, some cheeses (September); canned milk, all other cheeses, new automobiles, shoes (October); meats, fats, and oils (November); rubber tires (December 31).

Removed from rationing control during 1944 were: Canned grapefruit, soy beans, and mushrooms, and canned and bottled ready-to-serve soups (January); lard (later restored), dried fruits (March); typewriters, shortening and oils (later restored) (April); citrus juices and frozen foods (June); laundry stoves and ranges (August); bicycles, dried beans, jams and jellies (September); coal and wood stoves (October).

Leon Henderson, who had been OPA Administrator for nearly two years, resigned on January 26, 1943, and was succeeded by Prentiss Brown. On April 8 the President issued the "Hold-the-Line" order under which the four-point program of the Office was announced by the Administrator on April 30 and put into effect during the summer and fall of 1943. On November 8, Mr. Brown resigned and Chester Bowles, who had been General Manager since July, became the third OPA Administrator.

Organization. The OPA Administrator is appointed by the President by and with the advice and consent of the Senate. Assisting him is a Deputy Administrator in charge of operations, a Hearings Administrator, and several policy advisory committees, together with an advisory and operations staff, the latter headed by a deputy administrator for each department of operations. The Hearings Administrator is responsible to the Administrator on all matters relating to the hearing, determination, and review of administrative proceedings for the OPA.

The advisory staff consists of the General Counsel who also acts as a legal adviser to the Administrator; the Economic Advisor, who advises on the economic aspects of the Stabilization Program and the implementation of OPA policy; the Congressional Information Director, who provides continuing expeditious liaison between Congress and OPA; the Industry Advisory Committee Director, who is responsible for the execution and coordination of this program; the Labor Relations Adviser, who clears all issues of labor policy and whose office services the labor policy committees; the Agricultural Relations Adviser, who is concerned with OPA relations with farmers; the Consumer Relations Adviser, who clears consumer problems, the Credit Policy Adviser, who maintains liaison with the Board of Governors of the Federal Reserve System on matters of consumer credit control; and a Veterans' Relations Adviser to give aid on the problems of returning servicemen.

The operations staff consists of the Deputy Administrator in charge of operations, six deputy administrators, each of whom is in charge of a department, and the field offices. To the Deputy Administrator's staff are attached the office of budget and planning, the office of personnel, the office of board management, and the office of administrative services. In addition there are an executive assistant and a number of special assistants to the Administrator who aid in coordinating agency-wide management functions.

The Accounting Department supervises all accounting investigations. It is made up of four accounting divisions—field, industrial, consumer products, services and audits—and a financial reporting division.

The Price Department is responsible for establishing, by regulation or order, maximum price regulations to control commodity and service prices.

It consists of the Office of the Deputy Administrator for Price, composed of several special assistants to the Deputy, the Export-Import Office, a legal division, and seven operating divisions. Each division in turn is made up of smaller units called branches, headed by a price executive or chief. The branches handle administration of pricing for specific groups of kindred items. The price divisions and branches are as follows: Food Price Division (branches: Cereals, Feeds, and Agricultural Chemicals; Grocery Products; Meats, Fish, Fats, and Oils; Wholesale-Retail and Fruit and Vegetable; Poultry, Eggs, and Dairy Products; Miscellaneous Processed Foods; Restaurant Price); Consumer Goods Price Division (branches: Apparel; Appliance and Equipment; Home Furnishings; Housewares and Accessories; Distribution; Leather, Fur, and Fibers; Textiles); Fuel Price Division (branches: Petroleum; Solid Fuels); Industrial Materials Price Division (branches: Iron and Steel; Nonferrous Metals; Building Materials and Construction; Lumber; Metal Mining Analysis); Industrial Manufacturing Price Division (branches: Automotive; Rubber, Chemicals, and Drugs; Machinery; Paper and Paper Products); Transportation and Public Utilities Division (Branches: Transportation; Public Utilities; Service Trades). The branches in turn are divided into sections which handle homogeneous groups of items. Sometimes sections are still further subdivided into units.

The Rationing Department at the end of 1945 was made up of the Office of the Deputy Administrator, a Legal Division, Division of Ration Currency Control (branches: Ration Banking; Reports and Statistics; Inventory Control); and 2 commodity divisions—Tire Rationing and Food Rationing. Food Rationing consisted of 3 branches—Industrial Users; Institutional Users; and Sugar. Each division is headed by a director. Effective January 5, 1946, this department was disestablished, the remaining function of sugar rationing being transferred to a sugar rationing office established in the Price Department.

The Rent Department, headed by the Deputy Administrator for Rent, is organized into a Program Division, an Operations Division, and a Legal Division. Rent control is administered through an office in each of 483 Defense Rental Areas in the United States and Territories.

The Enforcement Department, headed by the Deputy Administrator for Enforcement, consists of the Office of the Chief Investigator, a Litigation Division, and the following enforcement divisions: Apparel and Industrial Materials; Food; Rent and Durable Goods.

The Information Department, which handles public information and education, is headed by the Deputy Administrator for Information. It has an Office of Program Planning and three divisions: Group and Educational Services, Editorial, and Field.

There are 9 regional offices as follows: Region I, Boston, Mass.; Region II, New York, New York; Region III, Cleveland, Ohio; Region IV, Atlanta, Ga.; Region V, Dallas, Texas; Region VI, Chicago, Ill.; Region VII, Denver, Colo.; Region VIII, San Francisco, Calif.; Region IX, Washington, D.C. (Territories and Possessions). In addition, OPA had, at the end of December, 64 district offices and 4 territorial offices which serve as primary points of supervision over the price control boards and the defense rental area offices. During 1945, 9 regional distribution and verification centers were operating for the control of ration currency.

The war price and rationing boards, known

after January 4, 1946, as price control boards, administered the rationing program at the consumer level and served as an ultimate point of contact between OPA and retailers on matters concerning price control. In January, 1945, there were 5,568 such boards, but by the end of the year the number had been cut to about 1,900.

Local boards operate through "panels" established to handle various operating phases of the price and rationing programs. The ration panels issued ration books and ration coupons and certificates direct to the public, determined what extra rations were needed for special cases designated in the regulations, and performed other rationing and administrative functions. The price panels have the important job of securing maximum compliance with price regulations at the retail levels. They help to distribute regulations and explanatory price control material to retailers, hold trade meetings, and perform other educational functions. They also undertake regular surveys of prices and investigate consumer reports of violation. The price panels' responsibility for retail compliance includes such major fields as restaurants, used passenger cars, services, etc. The most important continuing program of the price panel is the work done on retail food price control. Commodity panels, such as automotive panels, restaurant panels, etc. have been set up in metropolitan board areas, where the work-load is heaviest. Authority has also been delegated to the price panels to negotiate with retailers in matters of consumer overcharges and to make recommendations to the district director on settlement of cases of consumer overcharges in which the price administrator has a statutory right of action. On V-J Day 8,337 price panels, with about 75,000 members, were active. By the end of October the number of price panels had been reduced to 6,947. During the year these panels had made almost 4 million visits to retail stores for educational or checking purposes, and had disclosed over a million stores in violation.

Local board members serve without pay. They are selected by State or local defense councils and their names are recommended to the Office of Price Administration for approval.

CHESTER BOWLES.

PRISONS, PAROLE AND CRIME CONTROL. Reconversion.

The war years offered many powerful incentives to men and women in prisons all over the United States to do something tangible and constructive to help win the war. Production of prison industries, the purchase of war bonds, blood bank donations, and other drives gave these isolated persons an opportunity to identify themselves with the problems of a society to which they belonged and must return. The discovery of peacetime equivalents to these wartime incentives is one of the important reconversion problems facing prison administrators today.

Another is the spectre of a "crime wave" which may this time prove to be something more than a mirage created by a few sensational crimes and an hysterical press. All the elements that make for an increase in crime seem to be on the immediate horizon. Large numbers of returning soldiers rightfully proud of their own value but "trigger-happy" and bitter toward shirkers, war-profiteers, and "two-timers"; displaced war-workers, new standards of money values with their inevitable injustices and many other problems of reconversion seem already to be breaking into a storm of lawlessness that will bring serious problems to prison administrators, police and courts.

Prison Population. Up to now, however, these factors have not been translated into any appreciable increase in the prison population. According to Bureau of Census reports the total prison population at the end of 1940 approximated 180,000. In 1943, the prison population had decreased to a little over 131,000 at the end of that year. On Dec. 31, 1944, the prison population showed a further decrease to 127,000. This decrease in prison population during the war years is striking. Whether this tendency has continued during 1945 is unknown, since the prison population data is not available and no estimates have been made.

The probabilities are, however, that the low point has been reached and that the postwar era may witness an equally striking rise in prison population. There are disturbing evidences of those elements previously mentioned precipitating into a genuine crime-wave, particularly in the large metropolitan areas. In the space of 78 days in New York City alone, 69 murders were committed. The rise in juvenile delinquency and the number of youthful offenders has been given wide publicity.

Army and Navy Correctional Programs. Probably the most striking development in the correctional field during 1945 has been the rapid expansion of the correctional programs of both the Army and Navy. As of Nov. 1, 1945, the Army had a total of 34,766 prisoners and the Navy a total of 16,070 prisoners. Faced with inadequate facilities, inexperienced personnel, and an exceedingly rapid rate of commitment, the task of building an adequate program was overwhelming. Unhindered by many traditional restrictions and with the assistance of some of the most prominent leaders in the civil correctional field, the Army and Navy programs soon showed rapid progress. From December, 1942, through Nov. 1, 1945, a total of 16,915 Army general prisoners were honorably restored to military duty. In general, both Army and Navy Corrections Divisions followed the lead of the well established philosophy of individualized diagnosis and treatment, construction and administration of institutions.

After the cessation of hostilities in August, 1945, the War Department formulated a procedure which provided for the reexamination of the sentences of all general prisoners through the operation of special clemency boards. The chairman of the special board that determined its broad policies with respect to the proper sentences for Army cases was first the Hon. Sherman Minton, U. S. Circuit Judge and former Senator from Indiana, and later Mr. Justice Owen Roberts, recently retired from the Supreme Court of the United States. These gentlemen in consultation with high-ranking Army officers have reviewed typical cases of convicted soldiers and recommended to the Secretary of War such revisions in the more or less hastily-imposed sentences of Army Courts-Martial as seemed to them appropriate. These decisions when and as approved by the Secretary of War, establish the bench-marks which will be used by reviewing boards in determining the need for clemency in particular cases.

The Navy's correctional program has gone through a similar rapid growth. The number of general courts-martial prisoners had increased 8000 during the fiscal year to a total of 14,524 and by November 1, 1945 had leapt to 16,070. Paralleling the Army procedures, the Secretary of the Navy established the Naval Clemency and Prison Inspection Board headed by Vice Admiral J. K. Taussig. A review of all cases committed for purely military offenses is being made each six months.

Progress in States. In State prison systems, the year was filled with plans for post-war expansion and improvement in both institutional facilities and programs. A few states began actual operations under new and forward looking legislation.

New York led the States this year in new correctional legislation. Under the laws of 1945, there was enacted a comprehensive and progressive program for improvement in both the field of correctional administration and control of juvenile delinquency. One statute, known as the Youth Act, authorized the establishment of local youth Bureaus, recreation and education projects, and general guidance for the development, protection and security of children. The act also created a temporary State Commission to assist local agencies in preventing juvenile delinquency and to reimburse half the cost of any local community program which the Commission approves.

Another New York statute provides that no child subject to the laws of the Children's Courts may be detained or committed to any jail, penitentiary, or lock-up or in any place where he may come in contact with previous offenders. Recent legislation also provides for a Reception Center at the Elmira Reformatory where all male offenders between the ages of 16 and 21 will be committed by the Courts for diagnosis and designation to the proper institution.

A marked advance in parole was made by the passage of a law unifying the nine separate parole systems in the State under a State Board of Paroles within the Department of Corrections.

The Wisconsin legislature took active measure to improve the treatment of offenders in that state by authorizing a \$600,000 diagnostic center at Madison. The center when constructed will furnish complete information concerning offenders committed by the courts. The center is to be operated jointly by the State Department of Public Welfare and the Medical School of the University of Wisconsin.

The State of Maryland approved legislation to provide indeterminate sentences for offenders between the ages of 16 to 25 years. The Women's Prison and the State Penal Farm will be converted into Reformatories for the incarceration of these youthful offenders. A second law revised the Juvenile Court statute, setting up a probation system, abolishing the jurisdiction of the obsolete Magistrate's Court in juvenile cases, and vesting it in the circuit courts. The age limit of juveniles is raised to 18 years and jurisdiction extends to dependent, delinquent, neglected and feeble-minded children.

This by no means exhausts the list of states active in the improvement of their correctional programs. California, Virginia, Pennsylvania, and Georgia are instances of states which are now building on foundations of legislation laid previously.

Accent on Youth. In practically all plans, programs, and statutes relating to correctional work and in crime control, the most notable element has been the emphasis on the youth. Public pressure for the prevention of juvenile delinquency has made itself felt in concrete ways.

The whole youth problem is highlighted by statistics showing that the age of persons arrested and imprisoned decreased sharply in the past few years. Statistics published by the Federal Bureau of Investigation reveal that in the first six months of 1945, 21.4 percent of all persons arrested were under 21 years of age as compared to 19.2 percent in the first six months of the previous year. Arrests for juvenile girls for crimes against property in-

creased 9.2 percent and arrests for boys for crimes against persons increased 23.8 percent. In the federal prison system the percentage of commitments under 20 years of age rose from 8.5 percent in 1941 to 15.2 percent in 1945.

Selective Service Violators. The problem of the Selective Service Act violators in the Federal prisons became somewhat more acute with the end of the war. At the end of the fiscal year 1945, there were 4,703 such violators in prison, although the commitment rate declined by one-third. Some effort has been made by groups of conscientious objectors for the release of Selective Service violators or for a grant of general amnesty. This has apparently met with little public support.

For nearly four years the Attorney General has been empowered under the provisions of Executive Order 8641 to grant special paroles to Selective Service violators recommended by the Director of the Selective Service System. During the past year 712 such paroles were granted as compared to 847 during the previous three and a half years.

Probation and Parole. This year seems to have been an active year for consideration and passage of legislation in the correctional field. Although much of the legislation proposed dealt with the youthful offender, a good deal of it was devoted to probation and parole. While much of the proposed legislation failed to pass the respective state legislatures the nature of the proposals themselves is significant.

In Colorado, for example, bills were introduced to allow the judge to place persons on probation, without the concurrence of the prosecuting attorney, and to create a State probation and parole system. The National Probation Association prepared the draft of these bills on request of the State Bar Association, but they failed to pass. In Connecticut, bills to establish State-wide administration of adult probation and a youth correction authority were pending in the State legislature.

The Florida legislature failed to pass a bill establishing a juvenile court in each county not having a separate court, to have exclusive and original jurisdiction of dependent and delinquent children under seventeen. The bill also provided for the appointment of a State director of juvenile probation. In Michigan, a little progress was achieved when the prohibition against using probation for persons having been twice convicted of a felony was eliminated.

A bill to establish a State board of adult probation and parole and to authorize the use of probation, parole and suspended sentence was passed by the House in the Montana legislature but killed in the Senate. In Nevada, the powers and duties of the State Board of Pardon and Parole Commissioners were enlarged, giving them the power to employ one or more parole officers.

Among the legislation passed in New York one bill gave the State Board of Parole the power to issue a certificate of good conduct to any person previously convicted in that state of a crime, who thereafter conducts himself in a manner warranting such a grant, and if such conduct has continued for a period of no less than five consecutive years. Persons who hold such certificates or who have been pardoned may have business or professional licenses restored to them. These laws affect the right to receive an alcoholic beverage license, to practise medicine, to be licensed as a private detective, and the franchise to vote.

In Wisconsin, a bill eliminating the necessity for the approval of the Governor, with reference

to paroles granted by the Department of Public Welfare to inmates of the State Reformatory or the Industrial House for Women, became law.

JAMES V. BENNETT.

PROCUREMENT DIVISION. A Division of the U.S. Department of the Treasury which procures supplies and services for the Government and controls the disposition of government property, exclusive of realty. In addition to its usual peacetime activities, the Division now maintains and replenishes stocks of strategic and critical war materials, buys products for Lend-Lease and for relief distribution through the Red Cross. Federal Business Associations located in the larger centers of the United States function as agencies of the Procurement Division to promote cooperation among the local federal activities with the object of effecting economies and increasing efficiency in the transaction of routine business of the Government, as well as assisting in various projects of the Procurement Division as requested. A Price Adjustment Board renegotiated war contracts consummated by the Procurement Division. Director of Procurement: Clifton E. Mack.

PRODUCTION AND MARKETING ADMINISTRATION: An agency of the U.S. Department of Agriculture, created Aug. 18, 1945, which consolidated several existing agencies. It consists of 10 commodity branches, 8 functional branches, a Field Service branch, 4 staff offices, the Commodity Credit Corporation, and the Federal Crop Insurance Corporation. One commodity branch exists for each of the following: cotton, dairy products, fruits and vegetables, grain, livestock, poultry, special commodities, sugar, and tobacco. Each branch is responsible, with respect to the commodities over which it has jurisdiction, for production, adjustment, purchases, subsidies, loans, processing, price support, and distribution. It may establish programs to effect economies in processing and marketing of food. It may cooperate with industry and other agencies of the Department in developing new or substitute products. It supervises market news services and maintains standards by means of inspection and grading. Administrator: J. B. Hutson.

PROTECTION AND SALVAGE OF ARTISTIC AND HISTORIC MONUMENTS IN WAR AREAS, American Commission for. A Commission announced by the U.S. Secretary of State, Aug. 20, 1943, which functions in conjunction with the War Department, State Department, and other government agencies, as well as with various museums, universities, and scholars, for the conservation of works of art and monuments in war areas. It is also charged with the duty of urging the restitution of works of art and archives appropriated by the Axis powers or individuals acting under their authority or consent. The Commission cooperates with similar committees of other countries, or of the United Nations, in furtherance of those objectives. Chairman: Justice Owen J. Roberts.

PROTESTANT EPISCOPAL CHURCH. Many months before V-E or V-J Day the Church through its National Council laid careful plans for its postwar strategy, and on May 1 launched its Reconstruction and Advance Fund. This effort has a two-fold purpose: 1. The creation of appreciation for the missionary work of the Church throughout the world, and the relationship between that work—the establishment of a world-wide Christian fellowship—and a lasting peace. 2. The raising of a minimum

of five million dollars for reconstruction in areas overrun by the war—China, Japan, the Philippines—and for advance in war areas and other strategic centers—among Negroes in the United States, in Latin America, and Liberia, and in the Armed Forces.

The Reconstruction and Advance Fund, without precedent in the Episcopal Church, will reach its climax on February 3, 1946, when every parish in the United States will make an every-member canvass to secure money to carry out the program. By that time it is expected Church people will be better informed about the Church's mission than ever before, as a result of the intensive educational program inaugurated in May, which is a primary purpose of the campaign.

During the closing months of the war, chaplains of the Church served with the Armed Forces, sharing with their men all the hardships and perils of modern war, as is evidenced by these official statistics:

	Army	Navy
Killed in action	6	2
Died from other causes	3	
Decorated for valor	56	9

The chaplains' ministry does not end with the cessation of fighting but continues throughout the days of occupation and peace; often a more difficult task than during actual combat. Nor does the ministry stop with meeting the fighting man's immediate need or problem. In cooperation with the Church at home, chaplains have presented to their men the Church, either in its ordained ministry or its world-wide mission, as a vocation. Many men have already indicated their purpose to make this their life work.

During 1945 changes in the House of Bishops were especially numerous. Twelve new bishops were consecrated, including three Missionary Bishops: R. H. Gooden (Panama Canal Zone), Bravid W. Harris (Liberia), and Arthur B. Kinsolving II (Arizona). The other new bishops with the exception of Thomas H. Wright (East Carolina), William R. Moody (Lexington), Henry I. Louttit (Suffragan, South Florida), and Alfred L. Banyard (Suffragan, New Jersey) were all Coadjutor Bishops: Donald B. Aldrich (Michigan), Conrad H. Gesner (South Dakota), Frederick L. Barry (Albany), C. Avery Mason (Dallas), and John E. Hines (Texas).

Three bishops died during the year: the Rt. Rev. H. P. Almon Abbott (Lexington), the Rt. Rev. Julius W. Atwood (retired, Arizona), and the Rt. Rev. Frank E. Touret (retired, Idaho).

The National Council's Department of Promotion continued to utilize radio and motion pictures as media for proclaiming the Church's message. Its second professional sound motion picture, *Thy Will Be Done*, was released in the autumn and met with instant success. The Religious Film Association accorded it its highest rating. The Department was also taking a leading part in the organization of a Protestant film association for the production of more and better motion pictures. In radio, the Church continued its participation in Columbia's Church of the Air, Mutual's Radio Chapel; stimulated use of local stations; and produced a second series of transcriptions for radio broadcast under the general title, *The Living People*. This series of nine transcriptions was directly related to the Church's annual Every Member Canvass and demonstrated the National Council's use of modern media.

The Church took a leading part in the National Clothing Drives and the Church Christmas Pack-

ages for distressed peoples in Europe and Asia. Through the Presiding Bishop's Fund for World Relief, Episcopalians gave in excess of \$50,000 for the succor of afflicted peoples, and were organizing to participate actively in the material aid programs of the World Council of Churches and the Church Committee for Relief in Asia.

During the year, Church people in the United States received new impressions and deeper understanding of the world-wide fellowship to which they belonged, through visits of distinguished churchmen from overseas. Chief among these were the Bishop of Melanesia, the Rt. Rev. Walter H. Baddeley; the Bishop of Tanganyika; the Rt. Rev. George A. Chambers, Bishop of Chichester; the Rt. Rev. G. K. A. Bell, who came to America for meetings of the Executive Committee of the World Council of Churches; and Dr. Francis C. M. Wei, president of Central China College, who came as the first visiting Henry R. Luce Professor of World Christianity of Union Theological Seminary, New York.

The General Convention, the central legislative body of the Church which meets triennially, will convene for its 55th session on September 10, 1946 in Philadelphia, instead of San Francisco as previously announced. Between sessions of the General Convention, the affairs of the Church are conducted by the National Council.

The headquarters of the National Council, which is the board of directors of the Domestic and Foreign Missionary Society, are in the Church Missions House, 281 Fourth Avenue, New York 10, N. Y. The official magazine is *Forth*, William E. Leidt, Editor. President of the National Council is the Rt. Rev. Henry St. George Tucker, formerly Bishop of Virginia.

The total number of communicants of the Episcopal Church in 7,818 parishes and missions was 1,568,152. Baptized persons numbered 2,269,962. Clergy numbered 6,449, and 209 priests were ordained during the year. In the Church (Sunday) Schools 394,456 pupils were enrolled. Baptisms during the year reached 86,410 and confirmations 68,868.

PSYCHIATRY. Now that the phase of war dominated by armed combat between the Allies and the Axis powers is at an end, the lessons of psychiatric experience may contribute their mite toward an understanding of the human mentality that makes wars possible.

The most humiliating realization of all is the fact that progress—if by progress is meant the attainment of a peaceful way of life devoted to the increase of knowledge and skills and the enhancement of cultural values—has not to date been demonstrated. The concept of progress must in the main be restricted to technological advances. Hitherto man has been more concerned with what he can do than with what he can be. Man's nature is reflected in his behavior, and war making reflects the nature and mentality of the makers of war. Their behavior represents for peace-loving peoples a primitive stage of social evolution.

World War II has not only discounted the idea of social progress on a world scale by exposing the bestial that may be in men, to outward seeming like other men, who come to occupy the seats of power; it has also revealed as never before the nature and quality of the existing human stock as a whole, both its admirable and its regrettable characteristics.

It has been a shock to the public to learn of the huge number of men rejected for military service

because of psychiatric findings; it has been further disturbing to know that even after such extensive exclusions the ratio of discharges from the service because of psychiatric disorders should be so high. Appel (*Amer. Journal of Psychiatry*, Jan. 1946) reports, from data compiled by Selective Service System, that during the period Jan. 1, 1942-June 30, 1945, nearly 1,750,000 men were rejected for service in the Army, Navy, Marine Corps, etc. because of neuropsychiatric disorders. This represented 12 percent of all men examined and 37 percent of those rejected for all causes.

The breakdown of these rejections showed three major groups: mental deficiency 33 percent, psychoneurosis 31 percent, psychopathic personality 21 percent. These figures are approximate.

Coming now to discharges during service we note that separations from the Army for psychiatric reasons fall into two categories: (a) Those granted medical discharge, (b) those classified as non-medical (psychopathic personality, mental deficiency and certain other conditions). During the 3½ year period ending June 30, 1945, there were 320,000 men given medical discharges from the Army because of neuropsychiatric disability (41 percent of all medical discharges). In addition 137,000 men were discharged for psychiatric reasons under a non-medical category, making a total of 457,000 men separated from the Army for neuropsychiatric disorders.

It is pointed out, however, that disability in the military sense is not the same as disability in civilian life, and that accordingly many of those considered unfit for military service were not disqualified for civilian occupations; likewise that of the men discharged for psychiatric reasons many would doubtless never have been recorded as casualties in civil life.

Critics of war psychiatry have not been lacking both without and within the medical profession and in and out of the Army. It has been urged that too many men were exempted from military service because of alleged psychological or personality difficulties, that the very emphasis on psychiatric screening tended to increase the material to be screened, and that too many neurotics and psychopaths were released from the Army instead of being disciplined into good soldiers. A comment on this latter point is the fact mentioned above that 30 percent of the men who failed to become or continue as good soldiers because of psychiatric conditions were discharged on administrative grounds and in a non-medical category.

It has been suggested, for example, that "There were no psychiatric casualties on Malta because there were no psychiatrists." Although there was no service psychiatrist on the island during the siege, Dr. Robin Lees, who was on Malta from February, 1942, to March, 1944, declares (*Lancet*, Jan. 13, 1945) that there were many psychiatric cases. Further, Brigadier Tunbridge reporting (*Lancet*, Nov. 10, 1945) "Psychiatric Experiences of a General Physician in Malta" from September, 1941, to June, 1943, on the basis of routine out-patient medical consultations, states that "approximately 50 percent of all out-patient cases showed evidences of a major psychiatric disorder either primary or secondary." The greater number of these were psychoneuroses which constituted "at least 30 percent of all medical out-patient consultations." These estimates are not very different from those from other theatres. In general the health and morale of the troops were good and their stamina and achievements under conditions of exceptional stress demonstrated uniquely the vital

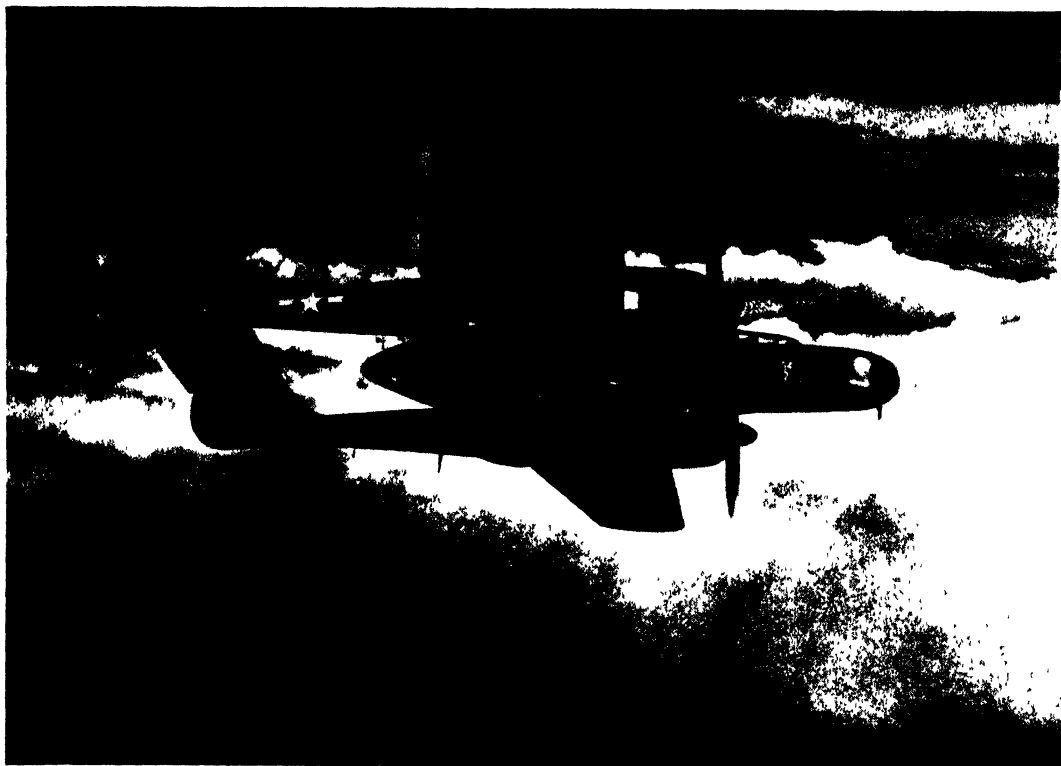
importance of leadership. It was "He," Field-Marshal Viscount Gort, VC, Governor of Malta, to whom this credit was due.

The main psychiatric problem throughout the war and in every area was the condition called neurosis; its prevention and treatment was the major task of the army psychiatrist, a task shared substantially by every medical officer. In this war particular emphasis was laid upon preventive measures, from initial screening, through training and up to the moment of combat. In these latter stages not only medical officers but also commanding officers and N.C.Os. often played a significant part.

Treatment of war neurosis consisted essentially in some variety of psychotherapy. Two words frequently encountered in the literature are "narco-analysis" (British) and "narcosynthesis" (American). By definition these words should mean opposite processes, but in practice they amounted to the same thing. The method is a combination of the narcotizing effect of a barbiturate administered intravenously, and suggestion, the latter being the key-note of all psychotherapy by whatever name it may be called. When under partial narcosis the patients are encouraged to "abreact," i.e. to talk out their distressing battle experiences. While many patients have undoubtedly been helped by this procedure (Grinker and Spiegel: *War Neuroses*, Blakiston, 1945), it has the disadvantage of any method that tends to become standardized and to be applied indiscriminately to all cases. The prime requisite of psychotherapy is individualization. McNeel points out (*Am. J. Psychiat.*, Jan., 1946) that simpler forms of psychotherapy accomplish equally good results and he is inclined to doubt the general applicability of the abreaction technique. It is the experience of the ages that neurotic symptoms may be relieved by the greatest variety, even the most bizarre, of procedures. The essentials are the personality, authority and manner of the therapist and what may be called the curative atmosphere of the clinical setting in which the treatment is applied. One may peruse with profit Sir Arthur Hurst's letter to the *British Medical Journal* (Mar. 6, 1943) in which he comments upon certain current fantastic theories as to the basis of neurosis and procedures for its relief. "My experience in the war of 1914-18," writes Sir Arthur, "and especially at Seale Hayne Military Hospital for Functional Nervous Disorders with its 350 patients and 10 medical officers, was that the war neuroses responded very well to simple psychotherapy in the form of explanation, persuasion and re-education. . . . A much smaller experience in the present war has not led me to alter my opinion."

Group psychotherapy was rather extensively resorted to in the exigencies of war. This was not a new technique; it had been experimented with in various clinics for a number of years, on the theory that patients with common problems could profit by group discussion of these problems under the leadership of the physician. It was largely the goad of necessity, however, that prompted the use of this procedure among the troops where it served a useful purpose. What place it will take under peacetime conditions remains to be seen. It has aroused sufficient interest to lead to the organization of an American association for the study and promotion of group therapy. A symposium on various aspects of the subject appeared in the *American Journal of Orthopsychiatry* (Oct., 1944).

There has been unfortunately considerable alarmist publicity about the needs of returning



THE "BLACK WIDOW" (P-61) NIGHTFIGHTER IN FLIGHT

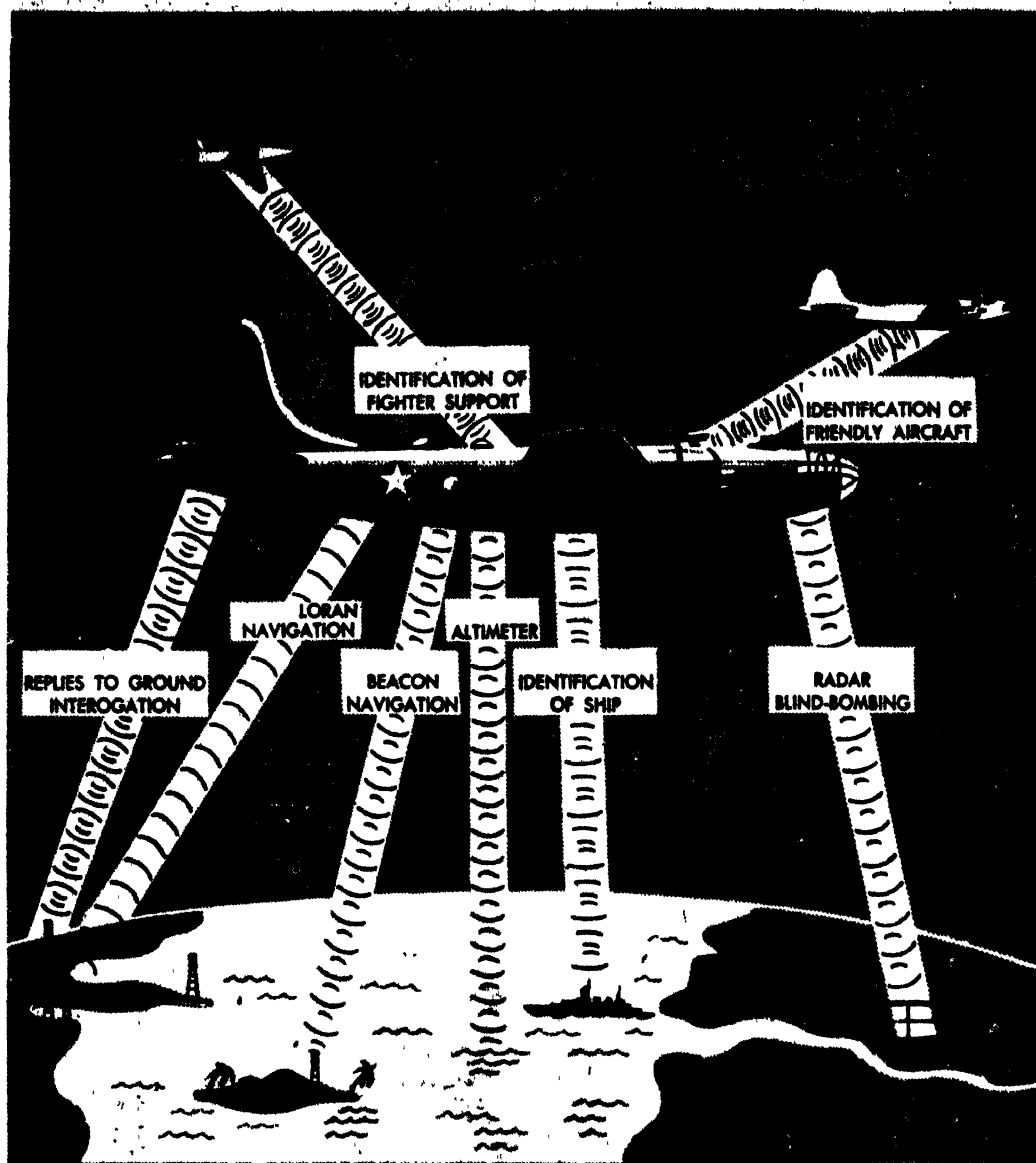
Special radar equipment enabled it to spot enemy planes in darkness, and to communicate with home base as well as fellow nightfighters.



A NEAR BY AAF BOMBER SUDDENLY APPEARS ON A PILOT'S SCOPE

By an extraordinary chance, this bomber, out in the blackness, came into the radar beam of a travelling plane—and announced itself. (Official U. S. AAF.)

THE FLYING RADAR SET



THE B-29 IS SOMETIMES REFERRED TO AS A FLYING RADAR SET. THE FUNCTIONS OF FIVE TYPES OF RADAR EQUIPMENT ARE SHOWN HERE



**THE DC-4, COMMERCIAL VERSION OF "SKYMASTER"
ARMY TRANSPORT** (Douglas)



THE B-26, USED IN LOW LEVEL PINPOINT BOMBING
(Glenn L. Martin)



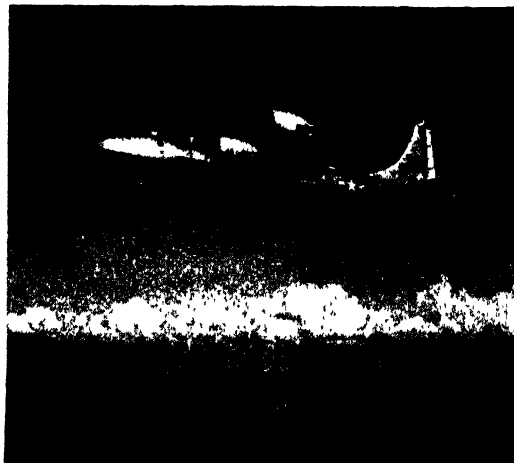
THE B-32, ANOTHER VERSION OF THE SUPERFORTRESS
(Otto Menge—Con. Vultee)



**THE BEARCAT, IMPROVED FORM OF THE NAVY'S
FAMOUS HELLCAT** (Grumman)



**THE GIANT MARS CROSSING GOLDEN GATE BRIDGE
ON THE SAN FRANCISCO TO HONOLULU RUN**
(Glen L. Martin)



THE B-29 SUPERFORTRESS
Carries more faster, farther, higher
than any other plane. (Boeing)

U.S. PLANES AS THE WAR ENDED



THE PILOTLESS "GARGOYLE"

A robot dive-bomber that does 600 miles an hour. (Official U. S. Navy)



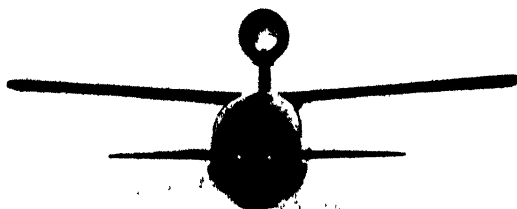
THE NAVY'S XFBB-1

A versatile single-engine fighter used as bomber, attack, torpedo, interceptor. (Boeing)



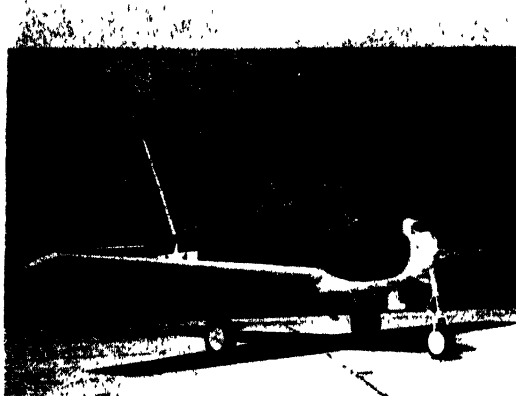
THE "CORSAIR," WITH 8 5-INCH ROCKETS

Also 6 .50 caliber machine guns, a 2,000 pound bomb load, and a speed of 450 miles (United)



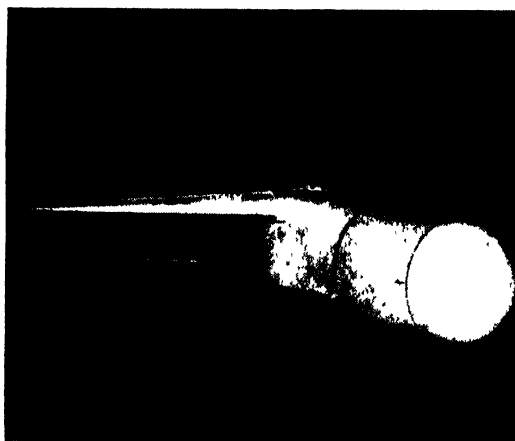
THE VICIOUS-LOOKING "GORGON"

A Robot, carrying 1000 lbs. of explosives at 400 miles. Power plant is in ring (Official U. S. Navy)



THE "GLOMB" IS A GLIDER-BOMBER

Guided by television, dives at 300 per hour. (Official U. S. Navy)



RADAR GUIDES THE "BAT"

Navy Privateer patrols can tuck a Bat under each wing and launch outside enemy range.

service men from the standpoint of mental health. Notoriously great wars are followed by social unrest and dislocation in many directions, involving service men as well as others. The recent war is patently no exception. To meet the needs of men from the armed forces, mental hygiene clinics and counselling centers have been set up by the government and local agencies in all parts of the country. Rennie (*Am. J. Psychiat.* Jan., 1945) deals comprehensively with the subject of psychiatric rehabilitation therapy as developed at the New York Hospital. The May, 1945, issue of *Diseases of the Nervous System* is given over entirely to "A Symposium on the Problem of Rehabilitation of Neuropsychiatric War Casualties." That more psychiatrists are needed throughout the country has long been known. Perhaps a greater need is for closer attention on the part of medicine as a whole to the personality of patients and the psychological factors in, and reactions to, illness and disability.

Psychopathic reactions among populations in liberated countries are discussed by Meerloo of Holland (*Lancet*, Apr. 7, 1945). He speaks of the baneful consequences of the long-continued Nazi propaganda infection, plus the effects of fear, starvation and exhaustion. Characteristic and widespread symptoms were a restless apathy and loss of initiative, intense suspiciousness and anxiety, often with aggressiveness. For five years murder, treason, deceit, black markets, perverted bestiality have been part of the real world of childhood, whose demoralization will constitute a serious educational problem. Meerloo comments that as the recovery of social health will be slow, political stability will be delayed.

Nichols (*J. Ment. Sci.*, Oct., 1944) compared the reactions of native African troops with those of the so-called civilized races. When the chiefs were told to supply a certain number of men as soldiers, the men responded as a matter of course. There were no conscientious objectors. Communal consciousness and tribal spirit prevailed. Their behavior as soldiers presented a striking contrast to their previous care-free lethargic village life. When neuroses developed they showed characteristically dramatic sensory and motor symptoms of hysteria, most of which responded fairly promptly to treatment. No case of true anxiety was observed in this primitive race. This was accounted for by their simple, direct and objective mental habits.

Intimately related to the problems of rehabilitation are those of mental hygiene in industry which has been receiving much attention during the past year. A series of articles in *Mental Hygiene* (Jan. and July, 1945) deals with various phases of the subject. All emphasize the importance of consideration for the worker's point of view, of avoiding paternalism on the part of management, of promoting by all and every means the spirit of teamwork and a quality of morale comparable to that of the best led combatant units overseas. The worker should find satisfaction in his work and take pride in his accomplishment over and above its monetary rewards. This involves job analysis.

The incorporation of psychiatry into the medical services of industrial plants is a favorable development. It is not a new phenomenon but has only recently received wider and more serious appreciation. The initial effort to introduce psychiatry into industry on a large scale was made by Anderson for R. H. Macy and Co. in New York City some 20 years ago. This work was continued for several years and was reviewed and discussed by Anderson in the Centennial issue of the *American Journal of Psychiatry* (1944).

Himmler and Eadie have set up mental hygiene programs in two of the General Motors Corporation plants that offer considerable promise. In such a program Himmler (*Ment. Hyg.* Jan., 1945) lays stress upon suitable foreman-worker contacts, to promote which foremen should receive instruction "presented in every-day language, given from a practical, common-sense point of view, tied in with their current problems." The great issue in mental hygiene in industry is the integration of the individual in the social group to which he belongs—the industrial group—with all that the term 'integration' implies. The indications are clear enough but the difficulties are great; for one thing is the fact, as Markuson points out (*Ment. Hyg.*, Jan., 1945), that over 60 percent of the nation's workers are employed in plants with a population of less than 500, in which adequate medical services are lacking.

In entering the industrial field, psychiatry and mental hygiene have to walk warily; they encounter in many quarters the same prejudice and opposition as, principally initially, in the armed forces. It is recalled that Elton Mayo ("Human Factors in an Industrial Civilization") arbitrarily and somewhat self-contradictorily ruled out the need for psychiatrists in industry, insisting that human relations problems in the industrial group are not "mental disorders" and should be handled by foremen and personnel and employment interviewers. With such a statement one may agree in the main, but it is important that personnel workers should be imbued with the principles of interviewing and handling men that the psychiatrist has found to be not merely good but indispensable in his practice. At the same time he will agree with Solby (*Ment. Hyg.* July 1945) that one of the tasks is to differentiate between 'psychoneurosis' and more or less similar behavior patterns resulting from situational maladjustments which may be readily corrected.

It is noteworthy that Cronin, Solby and Wilder (*Public Health Reports*, Nov. 9, 1945) have reported "a mental hygiene program initiated in Government departments and agencies for Federal employees, . . . with basic suggestions for a psychiatric program in industry." The report stems from experience of the mental hygiene unit of the employees' health service, U. S. Public Health Service, in Washington, during its first year of operation (Dec. 1943–Dec. 1944).

The most important move toward resolving the psychiatric problems in industry has been initiated by the National Association of Manufacturers. Having in mind the interests of war veterans and war workers and their re-absorption into peacetime industry, a subcommittee (Chairman C. C. Burlingame) of the medical advisory committee of the NAM spent a year in intensive study in many industrial plants throughout the country. The report of this subcommittee, "Readjustment to Civilian Jobs" (1945) is a sound, comprehensive and conservative statement of the problem, and furnishes a program that bids fair to become standard procedure. A strong point in this report is the note of caution it sounds against exaggerating the problem, "seeing trouble where none exists." This is timely in view of the overplus of alarmist writings about the rehabilitation of war-wracked veterans. The report is one of psychiatry's best contributions to social welfare.

Mental hygiene is making strides in industry; but so long as strikes continue, it still has far to go.

In the clinical field the interrelations of somatic and psychologic factors and symptoms of illness

continue to be widely discussed. Halliday (*Psychosom. Med.*, May, 1945) surveys the incidence in Britain of "psychosomatic affections" during the present century up to the outbreak of war—peptic ulcer and gastritis, psychoneurosis, the hypertensive cardiovascular disorders, diabetes. He found that diseases in which the physical aspects of the environment were highly significant tended to decrease, whereas those in which the psychological features of the environment were of etiologic importance tended to increase. There was an upward trend in the psychosomatic affections during the period surveyed, most marked in the younger age groups. "In peptic ulcer and also perhaps in the hypertensive disorders the upward trend involved males only." Regarding changes in sex incidence Halliday observes: "The diseases which preponderated in females during the late 19th century (peptic ulcer, exophthalmic goitre—also perhaps hysteria and essential hypertension) became manifested increasingly during the 20th century in males, whereas the diseases which preponderated in males (diabetes, suicide) became manifested increasingly in females."

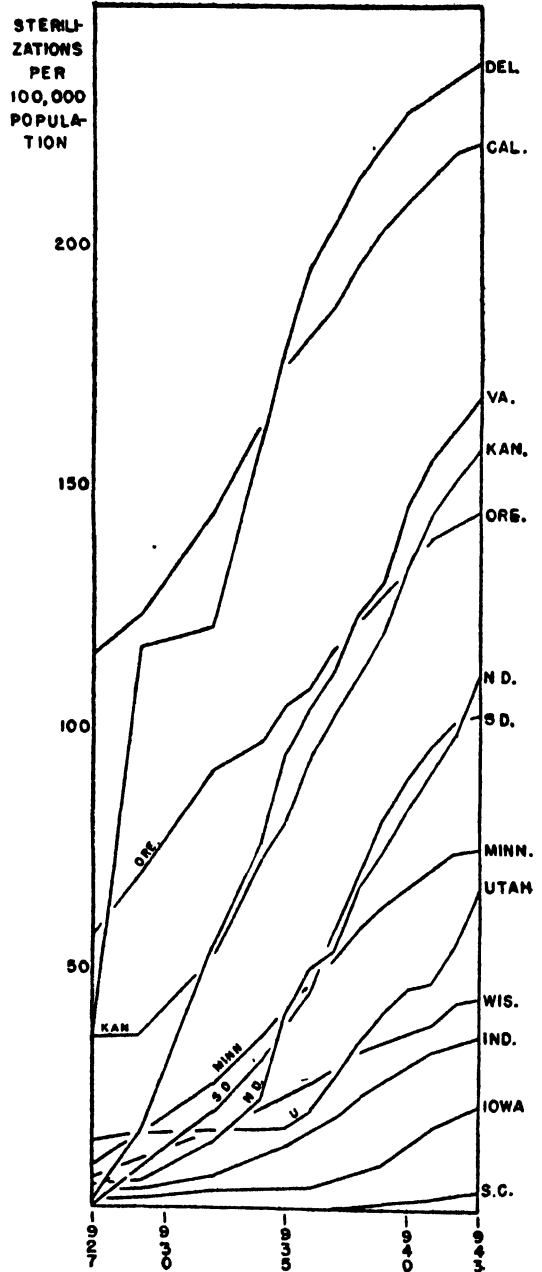
Psychosomatic problems in ophthalmology are the subject of a symposium (*J. Clin. Psychopathol.*, Jan.-Apr., 1945) with eight participants. Hartman insists that more time should be given to eye examinations in order to evaluate the personal side of the case. "Both the ophthalmologists and the patients who come to them with visual symptoms must understand that the eye is not isolated but part of the whole body and to some extent controlled by the psyche." Kronenberg deals with psychogenic factors in disturbances of vision and points to the necessity of close cooperation between ophthalmologist and psychiatrist in such cases. Psychosomatic factors in glaucoma, in disturbances of eye movements, in exophthalmos, in control of pupillary movements and in the function of the lachrymal glands are discussed by other participants.

Among the commoner symptoms for which patients seek medical help are weakness and fatigability, which may be of organic or non-organic origin or both. Allan (*Journal A.M.A.*, Apr. 14, 1945, and *New Eng. J. Med.* Sept. 21, 1944) found from examination of 300 patients with these complaints that 20 percent were attributable to physical causes and 80 percent to nervous conditions. Of the latter he felt that less than 1 of 5 was due to neurosis in the strict sense; a few patients showed simple mental depression; the majority he classified as "benign nervousness," due mainly to unusual stress from extrinsic factors. "The person with 'benign nervousness' feels pleased if told that the examination shows no physical disorder; the neurotic person is disappointed." While all these cases present problems that are psychiatric by definition, most benign nervous conditions should be treated, as the author convincingly points out, by the general physician. Indeed he argues that certain techniques of the specialists may be undesirable. "The fact that a patient has a nervous complaint does not justify intrusion into all the recesses of his private life. . . . Contrary to the idea, currently popular, that past emotional and psychologic trauma should be brought to light, it should be asserted that it is often better to avoid such remembrance." This view of an internist at least deserves consideration.

The subject of geriatrics, dealing with disabilities of the aging process in which mental conditions play so large a part, is gradually and belatedly receiving greater attention. An entire number of

Neurônio (São Paulo, Brazil, Apr., 1945) is devoted to a symposium on the subject consisting of 32 abstracts of articles ancient and modern from various countries prepared by Carvalho Ribas.

In recent years preoccupation with psychopathology and somatopsychic problems has meant comparative neglect of the field of neuropathology



STATE RECORDS IN EUGENIC STERILIZATION

which held out so much promise in the late 19th and early 20th centuries. The field has greatly expanded however and this basic study is as modern today as the shock therapies. No longer limited mainly to the gross and microscopic anatomy of dead tissues, the present status of neuropathology

as a composite discipline in which investigations in structural pathology, experimental pathology and experimental physiopathology of the nervous system all play their parts in elucidating psychiatric problems, is clearly set forth by Ferraro (*Psychiat. Quart.* Apr. 1945).

Finally a word about eugenic sterilization. This measure designed primarily for the limitation of mental defect is discussed by Gamble (*Am. J. Psychiat.* Nov. 1945) from the standpoint of the spread of state legislation. The oldest law that has remained in effect to date was passed in California in 1909, and that State has applied it in the greatest number of cases—16,332 to Jan. 1, 1944 (nearly 40 percent of the 41,928 reported for the United States).

Twenty-nine states now have sterilization laws. On the basis of the total number of cases per 100,000 population to Jan. 1, 1944, Delaware has been the most active state (238 sterilizations). Now follow California (221), Virginia (169), Kansas (158), Oregon (145), N. Dakota (112), S. Dakota (103), New Hampshire (98). The least active states were Georgia (9), Alabama (8), S. Carolina (4), Arizona (4), Idaho (3), W. Virginia (2).

CLARENCE B. FERRARO.

PSYCHOLOGY. The American Psychological Association, The American Association for Applied Psychology, and several other organizations of professional psychologists have consolidated to advance psychology as a science and a profession. Common business functions have been delegated to a central executive office, but the various interest groups retain autonomy in their separate divisions. The new organization bears the name of the American Psychological Association. Every region and every division has a representative in the governing council.

Among new books are: *Psychology for the Armed Services*, edited by E. G. Boring (Washington, D. C.: Infantry Journal); *Experimental Psychology: A Study in Method* by E. Greenwood (New York: King's Crown Press); *The Whole Man* by C. N. Bittle (Milwaukee: Bruce); *History of Psychology from the Standpoint of a Thomist* by R. E. Brennan (New York: Macmillan); *Psychology for Nurses* by B. V. Cunningham (New York: Appleton-Century); and *Psychology: Principles and Applications* by T. L. Engle (Yonkers, N. Y.: World Book), a text for secondary students. *Psychology of Invention in the Mathematical Field* by J. Hadamard (Princeton Univ. Press) analyses the creative thinking processes.

Physiological Psychology. M. B. Arnold finds evidence that there are "at least three different physiological states corresponding to three different emotions: fear, with predominantly sympathetic excitation; anger, with strong parasympathetic excitation; and excitement, with moderate parasympathetic," the latter being the most favorable condition for activity. Color difference thresholds over the entire spectral range can now be measured by a grating spectrometer. This method has demonstrated large individual differences in persons of "normal" color vision. G. A. Fry, P. Moon, and D. E. Spencer have proposed new theories of color vision. K. U. Smith reports recent clinical and surgical findings regarding contralateral hemispheric control of motor functions. Sectioning the corpus callosum and other commissural pathways of the forebrain resulted in only slight and insignificant changes in handedness, eyedness, etc. Speech appeared to be independent of the inter-cortical integrations in the patients operated.

T. C. Barnes and R. Beutner have produced artificial electrical brain waves by bringing acetylcholine into contact with brain extract.

Childhood and Parenthood. A. L. Baldwin, J. Kalhorn, and F. H. Breese report an objective study of parent behavior and its effects on child development. They point out that parent behavior depends both on the emotional attitude of the parent and on his philosophy of child care; parents of mediocre intelligence, limited education, and low social status are likely to be authoritarian. Children in acceptant-democratic homes show significant gains in I. Q. over a three-year period. The democratic home favors the development of originality, planfulness, patience, and curiosity. Actively repressed and rejected children develop a highly emotional nonconformist attitude. In many instances, parents' emotions run counter to their avowed philosophy. When child care has interrupted a prestige-bringing career, motherhood may be a frustrating experience and the child profoundly rejected. Satisfactory emotional relationships do not, however, guarantee adequate methods of handling children, especially in a culture where authoritarianism is traditional. Courses in child care in high schools might improve child care.

Among new books are: *Practices of Parents in Dealing with Preschool Children* by G. G. La Fore (Teachers College, Columbia); *Social Concepts and the Child Mind* by H. Ordan (New York: King's Crown); and *A Workbook in Child Development* by G. E. Schlessler (Philadelphia: Saunders) with a teachers' guide. *The Embryology of Behavior: the Beginnings of the Human Mind* by A. Gesell and C. S. Amatruda (Harper) extends the authors' normative picture of behavior backward into the prenatal period, as observed in prematurely born infants.

Personality and Character. O. H. Mowrer and A. D. Ullman propose a rational explanation of the puzzling fact that living organisms, including people, sometimes persist in behavior which is more punishing than rewarding. They find that the timing of consequences is often the deciding factor. If punishing effects are too long delayed, they are not effective in inhibiting the behavior.

In *The Cultural Background of Personality* (New York: Appleton-Century), R. Linton points out that the interaction of the individual with his society and culture is responsible for most of his behavior patterns, the favorable and unfavorable responses from others being the most frequent incentives. *The Unknown Murderer* by T. Reik, translated by K. Jones (New York: Prentice-Hall), is a psychoanalytic study of the judicial process and the factors which make for false convictions. *Cooperation in Crime Control*, edited by M. Bell, is the yearbook of the National Probation Association. S. J. Holmes points out that altruism is not derived from egoism but is as old as life itself. In social animals especially, altruism is a deep-seated trait and plays an important part in the struggle for life. G. A. Kimble has studied differences between Rorschach records obtained in the laboratory and those obtained from the same group of students in the social atmosphere of a cafeteria, where color responses increased. *Large Scale Rorschach Techniques* is a manual for the group Rorschach and multiple choice test by M. R. Harrower-Erickson and M. E. Steiner (Springfield, Ill.: C. C. Thomas). W. Goldfarb has devised an Animal Association Test as an aid in interpreting the symbolic significance of animal responses in the Rorschach. L. Wekstein offers new stimulus

pictures for fantasy projection tests. *Women and Men* by A. Scheinfeld (Harcourt, Brace) attempts a description of human sex differences, biological, social, and psychological. Among other new books are *Psychology of Sex Relations* by T. Reik (Farar & Rinehart) and *The Psychology of Women*, vol. 2 *Motherhood* by H. Deutsch (New York: Gruene & Stratton).

Clinical Psychology and Related Fields. Clinical psychologists are making increasing use of the client-centered, "nondirective therapy" first developed by C. R. Rogers. J. B. Dynes and F. J. Hamilton report successful group therapy of psychiatric war casualties. J. E. Finesinger and E. Lindemann point to the need for a "de-doctrination program" for discharged veterans. *Psychology for the Returning Serviceman*, edited by I. L. Child and M. Van de Water (Washington, D. C., New York: Infantry Journal, Penguin Books) deals with readjustment to civilian status. A. Schuetz points out that the homecomer who hopes to reestablish old intimate we-relationships is disappointed because both he and the welcomer have changed, and both have built up pseudo-types of each other. *Rehabilitation of the Disabled Serviceman* (Russell Sage Foundation) is a bibliography on services for handicapped veterans. G. Klopff has also prepared a bibliography on the adjustment of World War II veterans. J. B. Dynes contends that hospitals tend to hold convalescents too long, thereby inducing a dependency reaction. Aptitude training followed by a real job is the cure. Pioneer work in military hospitals has had good results, and they may become the proving ground for a broad rehabilitation program in civilian hospitals. Stanford University has undertaken research on the social rehabilitation of the physically handicapped. Though emphasis is on the war handicapped, civilians are included also. F. Heider and C. M. Heider report a study of the adjustment of the adult deaf. According to J. C. Howard, Jr., this World War will leave 250,000 servicemen with impaired hearing. Some cases involve only high-tone loss, others low-tone loss, others all frequencies. Threshold values at each frequency must be measured so that the amplifying system will compensate for all irregularities in each individual. L. V. Kingsley and R. M. Hyde have studied selectees rejected for failure to meet mental and literacy standards. They find alcoholism no more prevalent among defectives than among normals, and most defectives seemed to compare favorably with normals in their ability to support themselves. L. H. Snyder, M. D. Schonfeld, and E. M. Offerman find evidence that some isolated cases of feeble-mindedness in highly intelligent families may be due to the conception of Rh plus children by Rh negative mothers, resulting in prenatal injury caused by Rh immunization. Discussing the problems of senescence, G. Lawton points out the desirability of giving old people real jobs, real family relationships, and a real function in society. Lawton says, "Whenever knowledge of tactics, of various ways of doing things is important, then it is that the older person is valued. The older doctor or lawyer, the craftsman, the political leader, the artist in living—all these can more than hold their own in competition with young people."

The Psychology of Diet and Nutrition by L. S. Selling and M. A. S. Ferraro (New York: Norton) discusses child feeding problems, food faddists, dieting, and institutional and group feeding. P. T. Young and J. P. Chaplin, studying appetite in rats, find evidence that it is determined by or-

ganic needs. *Manual for the Study of Food Habits* is a Report of the Committee on Food Habits of the National Research Council, C. E. Guthe, Chairman. J. H. Masserman finds that "alcohol, in moderate doses, disorganizes complex, recently learned response patterns, whether normal or neurotic, and thereby releases earlier and more elemental forms of goal-directed behavior. These ameliorative effects of the drug are sometimes sought by animals that have experienced them." *Alcohol, Science, and Society* contains 29 lectures with discussions as given at the Yale Summer School of Alcohol Studies (New Haven: Quart. J. Stud. Alcohol).

Among new books are: *Mental Disorders in Later Life* by O. J. Kaplan (Stanford Univ. Press); *Techniques of Guidance, Tests, Records, and Counselling in a Guidance Program* by A. E. Traxler (Harper); and *Frontier Thinking in Guidance*, edited by J. R. Yale (Chicago: Science Research Associates). *Marriage and Family Counselling* by S. E. Goldstein (New York: McGraw-Hill) is a general manual for ministers, doctors, lawyers, teachers, social workers, and others. *Patients Have Families* by H. B. Richardson (New York: Commonwealth Fund) views the family as the unit of illness and of treatment. *The Journal of Clinical Psychology*, recently established, is edited by F. C. Thorne (Burlington, Vt.: Free Press).

Measurement and Evaluation. There is a growing tendency to replace the term "psychological measurement" with "evaluation." L. L. Thurstone contends that "the general use of a single index of intelligence such as the intelligence quotient should be discontinued." Instead, he suggests describing each individual in terms of a profile of abilities "that have been found experimentally to be truly fundamental and independent, including verbal comprehension (V), word fluency (W), number facility (N), memory (M), visualizing or space thinking (S), perceptual speed (P), induction (I), and speed of judgment (J)." J. C. Flanagan reports that in the AAF a battery of aptitude tests was found more useful than general intelligence level. Among new books are: *The Application of Measurement to Health and Physical Education* by H. H. Clarke (Prentice-Hall); *On Measurement of Motor Skills: An Approach through a Statistical Analysis of Archery Scores* by E. M. Schroeder (King's Crown Press), and *Intelligence and Its Deviations* by M. Sherman (Ronald).

Education. *Group Planning in Education* by P. J. Misner and others is the Year Book of the Department of Supervision and Curriculum Development of the National Education Association. The authors maintain that "As the child develops in the school's social groups he must experience ever-widening opportunities to be genuinely valuable to other people." "The awarding of prizes, distinctions, and honors works against . . . the development of characteristics essential to intelligent social action." According to N. Greener and L. Rath, the curriculum should be one in which the children are striving to solve problems and find reasons, and the teacher should be learning along with the children. W. A. Brownell points out the importance of teaching meanings in arithmetic from the beginning, because meaningful arithmetic is more easily learned, better retained, and more easily rehabilitated, and it is only meaningful arithmetic that can function in intelligent living. From a survey of the literature on reading, K. H. Burkart finds 214 abilities which various specialists have thought to be involved in the reading process. G. Hildreth finds evidence that mixed dominance is not a pre-

vailing factor in reading difficulties. *An Index to Professional Literature on Reading and Related Topics* by E. A. Betts and T. M. Betts (New York: American Book) includes 8,278 references. The authors emphasize first teaching rather than remedial reading but find that studies at secondary and college levels are also of growing importance. *Reading Difficulty and Personality Organization* is by E. Gann (King's Crown). G. Hildreth finds indirect experimental evidence that manuscript writing can become as rapid as cursive writing. H. A. Edgerton and S. H. Britt report that annual surveys are being made of the social, physical, and professional development of all entrants in the first and second Science Talent Searches. Various educators have noted desirable and undesirable features of army training methods. It seems possible for professional educators to learn something from both the good and the bad features of the army programs. On the desirable side, T. J. Abernathy finds the following factors: a precise statement of objectives, content of instruction limited to essentials for attaining these objectives, and emphasis on learning by doing. H. W. Bailey and K. M. Dallenbach report a study of selective procedures and educational achievement of ASTP trainees. They conclude that "it is easy to overestimate the amount of acceleration that is feasible even with superior students."

Industrial Psychology and Personnel Work. "If the factory can become a place where human beings live a social as well as an economic life," says W. B. D. Brown, "then the normal incentives which operate in the home, in the village, or in the club will begin to operate within the factory. If that time should come to pass, then work itself may some day become something that is looked forward to as an activity to be enjoyed." R. English has devised a self-analysis check list for office managers and supervisors with regard to their procedures in handling employees. According to L. E. Himler, the good foreman must be a psychotherapist, though an amateur. E. Freeman offers a program for the improvement of vision in industry, in which families of visual skills are to be correlated with job families. Among new books are *Vocational Interest Patterns* by I. Wightwick (Teachers College, Columbia); *Employment Tests in Business and Industry* by H. C. Benjamin (Princeton Univ., Industrial Relations Section), an annotated bibliography; *Personnel Work in Schools of Nursing* by F. O. Triggs (Saunders); *Personnel Relations: Their Application in a Democracy* by J. E. Walters (Ronald), and *Employee Counselling: A New Viewpoint in Industrial Psychology* by N. Canton (McGraw-Hill).

Social Psychology. *Human Nature and Enduring Peace* by G. Murphy and 58 other psychologists is the 3d Year Book of the Society for the Psychological Study of Social Issues. It views frustration as the cause of wars and offers a positive program, including "world-minded education." 2,038 psychologists signed "the psychologist's manifesto," a 10-point statement, which may be summarized as follows: 1. War can be avoided. No race, nation, or social group is inevitably warlike. The frustrations and conflicting interests which lie at the root of aggressive wars can be reduced and redirected by social engineering. 2. In planning for permanent peace, the coming generation should be the primary focus of attention. 3. Racial, national, and group hatreds can be controlled. "Prejudice is a matter of attitudes, and attitudes are to a considerable extent a matter of training and experience." 4. Condescension toward "inferior" groups

destroys our chance for a lasting peace. 5. Liberated and enemy peoples must participate in planning their own destiny. 6. The confusion of defeated people will call for clarity and consistency in the application of rewards and punishments. 7. If properly administered, relief and rehabilitation can lead to self-reliance and cooperation; if improperly, to resentment and hatred. 8. The root desires of the common people of all lands are the safest guide to framing a peace. 9. The trend of human relationships is toward ever wider units of collective security. 10. Commitments now may prevent postwar apathy and reaction.

Twenty-two social scientists representing diverse fields collaborated on *The Science of Man in the World Crisis* edited by R. Linton (Columbia Univ. Press). In *Conscience and Society: A Study of the Psychological Prerequisites of Law and Order* (New York: Emerson), R. West contends that understanding, not conscience, is at fault in producing wars and that international law is needed. R. Stagner advocates a reasonable rather than a vengeful peace, and points out that techniques of psychological warfare should not be allowed to foster attitudes which may later interfere with postwar organization. *Germany Between Two Wars* is a study of propaganda and war guilt by L. M. Fraser (Oxford Univ. Press). Among other new books are *The Psychological Frontiers of Society* by A. Kardiner, R. Linton, C. Du Bois, and J. West (Columbia Univ. Press); *The Governing of Men* by A. H. Leighton (Princeton Univ. Press); *Main Springs of Civilization* by E. Huntington (New York: Wiley); *The Use of Personal Documents in History, Anthropology, and Sociology* by L. Gottschalk, C. Kluckhohn, and R. Angell (Soc. Sci. Res. Coun. Bull., 1945, No. 53); *The Social Theory of James Mark Baldwin* by V. D. Sewny (King's Crown); and *The Sociology of the Family* by M. C. Elmer (Ginn). *The Neurologist's Point of View: Essays on Psychiatric and Other Subjects* by I. S. Wechsler (New York: Fischer) discusses many problems including racial psychology, anti-Semitism, colonization, and history of psychiatry. *Plainville, U. S. A.*, by J. West (pseud.) (Columbia Univ. Press) describes in non-technical language an anthropological study of a small contemporary American rural community. *The Journal of Social Issues*, started this year by the Society for the Psychological Study of Social Issues, devoted its first two issues to racial and religious prejudice in everyday living.

MABEL F. MARTIN.

PUBLIC BUILDINGS ADMINISTRATION (PBA). An agency of the U.S. Government under the jurisdiction of the Federal Works Agency. It is responsible for the administrative, technical, and clerical functions incident to the design, construction, maintenance, and repair of federal buildings. The Emergency Operations Unit builds federally constructed schools, hospitals, and health buildings under the War Public Works Program. The Administration is awaiting Congressional authorization of a large program of needed construction of post offices, court houses and other Federal buildings. Commissioner in 1945: W. E. Reynolds.

PUBLIC FINANCE. The end of World War II and the initial stages of the postwar transition were reflected in wide fluctuations in public finance. Federal expenditures reached an all-time peak in June, 1945, when they aggregated \$9,641,000,000 for one month. War expenditures reached their peak in March, and declined very rapidly begin-

ning with July. In the closing months of the year, federal outlays were less than half the June level.

While the precipitant contraction of expenditures during the second half of the year was the outstanding fiscal development of 1945, several other events occurred which are bound to influence federal financial policy for some time to come. The resignation of Henry Morgenthau, Jr. as Secretary of the Treasury and the appointment of Judge Fred M. Vinson to that post was widely interpreted as an indication that a more conservative fiscal policy would prevail for the future. With his long career in Congress, Judge Vinson was expected to reflect more closely the viewpoint of the legislative branch of the Government, and to be less interested in utilizing fiscal policy as a weapon for social reform. As regards the policy of low interest rates, however, Mr. Vinson soon made it clear that he saw eye to eye with his predecessor, and that he favored a low interest cost on the huge federal debt as a means of keeping down the total of peacetime government expenditures.

The Truman Administration appeared determined, furthermore, to limit American financial commitments abroad. The President halted Lend-Lease abruptly when Japan surrendered, and while a large dollar credit to Britain was negotiated in the closing weeks of the year, it was evident that the Government was not going to pour out funds indiscriminately, and without provision for repayment, for postwar reconstruction and development abroad.

Before the end of 1945, Secretary Vinson predicted that the budget would be balanced in the course of the fiscal year beginning July 1, 1946. To this end, he urged that Congress proceed cautiously in tax reductions, and that unnecessary Government expenditures be avoided.

Federal Expenditures. Total expenditures for the fiscal year ended June 30, 1945, were \$100,405,000,000, the highest ever recorded. Of this total, war activities alone accounted for \$90,029,000,000, and general expenses of Government \$8,730,000,000. Veterans' Administration and Social Security outlays absorbed \$1,646,000,000.

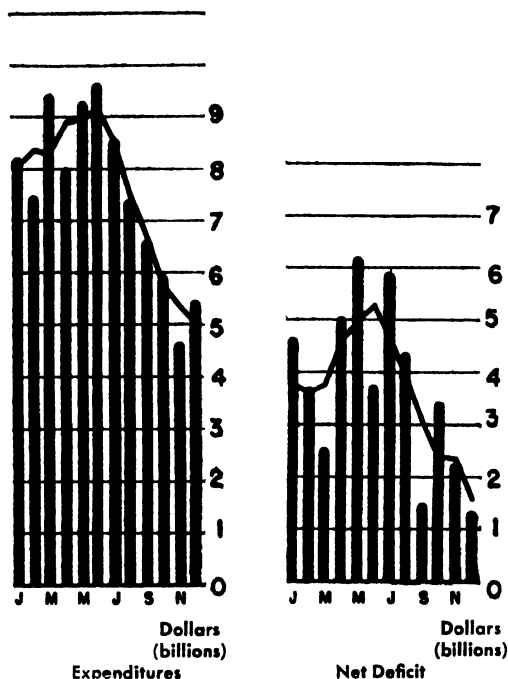
Outlays for the fiscal years 1944 and 1945, and estimates for the 1946 fiscal year, are shown in Table I.

TABLE I—EXPENDITURES FOR THE FISCAL YEARS 1944, 1945 AND 1946 (ESTIMATED)
(In millions of dollars)

	Actual 1944	Actual 1945	Estimated 1946
War Activities			
War Department	49,242	50,337	27,997
Navy Department	26,538	30,047	14,700
Miscellaneous war activities	11,259	9,645	6,103
Total war activities	87,039	90,029	48,800
Veterans' Administration	730	2,060	3,402
Public works	438	323	694
Aid to agriculture	909	782	640
Social Security program	803	815	931
Refunds of taxes	202	1,707	2,707
Other	958	1,092	5,470
Interest on the public debt	2,609	3,617	4,750
Total Expenditures	93,744	100,405	67,394

For the fiscal year 1945, the largest proportionate increase in war expenditures was by the Navy Department. Its outlays for the year were \$30,047,000,000, as compared with \$26,538,000,000 in the preceding fiscal year. War Department outlays aggregated \$50,337,000,000, as compared with \$49,242,000,000 in the 1944 fiscal year. The United States Maritime Commission's huge mer-

chant shipbuilding program passed its peak in 1944, expenditures through the Maritime Commission aggregating \$3,227,000,000 in the 1945 fiscal year, as compared with \$3,812,000,000 in 1944. War Department outlays declined from \$4,664,000,000 in June to \$2,476,000,000 in December. Navy Department expenditures fell from \$2,724,000,000 in May to \$990,000,000 in December. Maritime Commission spending fell from \$277,000,000 in June to \$44,000,000 in the final month of the year.



NET BUDGETARY EXPENDITURES AND DEFICIT, 1945

Line indicates 3-month moving average

While war spending declined very sharply beginning with the summer of 1945, general expenditures of the Government increased. General expenditures and transfers to trust funds for the fiscal year ended June 30, 1945, were \$10,376,000,000, as compared with \$6,705,000,000 the year before. The chief factor in the increase in general expenditures has been the rise in interest paid on the public debt, resulting from the very great increase in the size of the debt during the war. Interest on the public debt aggregated \$3,617,000,000 in the 1945 fiscal year, as compared with \$2,609,000,000 the year before. A special factor that stepped up general expenditures sharply in the 1945 fiscal year was the large item for "refunds of taxes" representing the excess profits tax refund bonds issued before the enactment of the Tax Adjustment Act of 1945. The Veterans' Administration spent \$2,060,000,000 in 1945, as compared with \$730,000,000 in 1944, and further increases in this item are inevitable. General expenditures and transfers to trust accounts other than those of the Veterans' Administration, interest on the public debt and tax refunds were \$2,992,000,000 in 1945, as compared with \$3,104,000,000 the year before.

With a high level of business activity widely anticipated, Congressional resistance to some types

of expenditure and a relatively more conservative Administration in office, the end of the post-war transition period may witness a level of federal expenditures substantially lower than had been expected by many. Even with interest on the public debt of about \$5,000,000,000 a year and heavier veterans' benefits, a reduction in federal outlays to less than \$25,000,000,000 a year may not be an unreasonable expectation. In the fiscal year ended June 30, 1941, federal expenditures were \$12,711,000,000. While interest, Veterans' Administration and defense expenditures are bound to remain substantially higher than the 1941 level, other types of outlays such as aid to agriculture, public works and relief could decline far below the 1941 level over the next few years.

Federal Revenues. The receipts of the Federal Government in the 1945 fiscal year rose to \$47,740,000,000, the largest ever recorded. These receipts compared with \$45,408,000,000 in the preceding fiscal year. As in 1944, receipts in 1945 were somewhat above 47 percent of total expenditures. The chief sources of the Treasury's receipts for the fiscal years 1944 and 1945, and an estimate for the fiscal year beginning July 1, 1945, are shown in Table II.

TABLE II—RECEIPTS FOR THE FISCAL YEARS 1944, 1945 AND 1946 (ESTIMATED)
(In millions of dollars)

	Actual	Actual	Estimated
Receipts			
Internal Revenue:			
Income and profits taxes	34,855	35,173	27,221
Employment taxes	1,739	1,780	1,569
Miscellaneous internal revenue	5,291	6,949	7,320
Customs	431	355	413
Other receipts	3,292	3,483	3,183
Total Receipts	45,408	47,740	39,707
Less:			
Amounts transferred to Federal Old-Age and Survivors Insurance Trust Fund	1,260	1,283	1,098
Net Receipts	44,149	46,457	38,609

The yields from major taxes in the 1944 and 1945 fiscal periods are shown in Table III.

TABLE III—FEDERAL TAX COLLECTIONS
(In thousands of dollars)

	1944	1945
Individual income	18,281,005	19,034,313
Corporation income	5,284,145	4,879,716
Excess profits	9,345,198	11,003,520
Miscellaneous profits	137,452	143,978
Capital stock	380,702	371,999
Estate	473,466	596,137
Gift	37,745	46,918
Alcoholic beverage	1,618,045	2,309,864
Tobacco	988,483	932,145
Stamp taxes	50,800	65,528
Manufacturers' and retailers' excises	728,694	1,208,616
Selective sales	1,075,401	1,430,428
Customs	431,000	365,000
Total taxes	39,412,136	43,176,162
Employment taxes	1,738,372	1,779,177
Total taxes and so-called employment taxes	41,350,508	44,955,339

With the decline in expenditures following the end of the war, pressure for lower taxes has become overwhelming. The Tax Adjustment Act of 1945 effected a reduction in receipts which was more nominal than real, since this law merely eliminated the 10 percent postwar refund feature of the excess profits tax and accelerated benefits to

corporations from the carryback of unused excess profits tax credits and operating deficits.

The Revenue Act of 1945 is scheduled to reduce receipts by \$5,930,000,000 for the calendar year 1946, but it did not affect Treasury revenues in 1945. The high wartime tax structure will probably be reduced gradually over a period of years, particularly if prosperous business conditions maintain yields at a high level, as occurred during the '20s.

Treasury Financing. The public debt of the United States increased by \$57,679,000,000 during the 1945 fiscal year. Since the Treasury's General Fund increased by \$4,529,000,000 during the fiscal year, not all of the money borrowed was spent during that period. On June 30, 1945, the national debt aggregated \$258,682,000,000. The several types of obligations outstanding, with comparable amounts for June 30, 1944, are shown in Table IV.

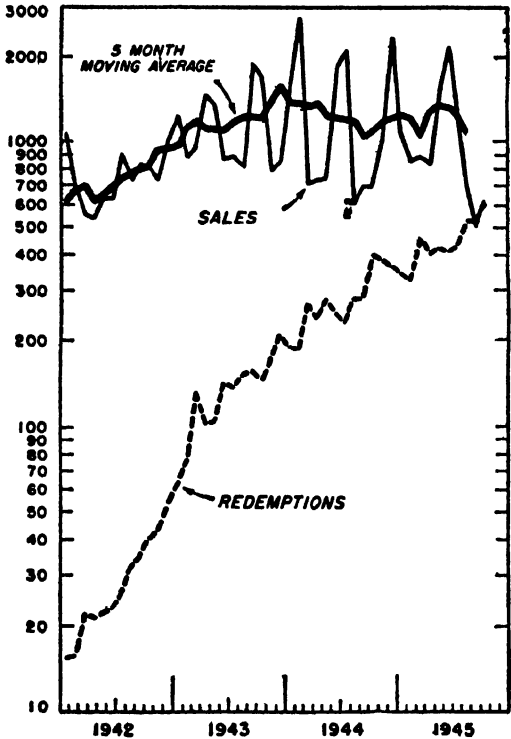
TABLE IV STATEMENT OF THE PUBLIC DEBT
(In millions of dollars)

	1944	1945
Public issues:		
Interest-bearing debt:		
Marketable issues:		
Treasury bills	14,734	17,041
Certificates of indebtedness	28,822	34,136
Treasury notes	17,405	23,497
Treasury bonds	79,244	106,448
Postal savings and other bonds	196	196
Total Marketable Issues	140,401	181,319
Nonmarketable issues:		
U S savings bonds	34,606	45,586
Treasury notes—tax and savings series	9,557	10,136
Adjusted service bonds	217	
Depository bonds	474	505
Total Nonmarketable Issues	44,855	56,226
Total interest-bearing public issues	185,256	237,545
Matured debt on which interest has ceased	201	269
Debt bearing no interest	1,259	2,057
Total public issues	186,716	239,871
Special issues	14,287	18,812
Total public debt outstanding	201,003	258,683

Although war expenditures declined sharply during the second half of 1945, the Treasury launched a final Victory Loan late in the year. The Seventh War Loan, the only other drive during the calendar year and the last for the war period, was conducted between May 14 and June 30. While its goal was only \$14,000,000,000, actual sales aggregated \$26,300,000,000. In this most successful of the war loan drives, sales of Series E savings bonds aggregated \$4,000,000,000, and all other obligations to individuals \$4,700,000,000. Sales to corporations and financial institutions aggregated \$17,600,000,000. The demand for long-term obligations was particularly heavy, because of premiums at which older long-term issues were quoted in the market and doubt that the future supply of such issues would be adequate to satisfy the demand.

The goal for the Victory Loan was set at \$11,000,000,000, with sales to individuals extending from October 29 through December 8, while sales to other investors were concentrated in the period December 3–8. Like the war loan drives, the Victory Loan was heavily oversubscribed, with the result that the Treasury cash balance was lifted well above \$25,000,000,000 by the close of the calendar year. Armed with this huge General Fund, the Treasury was in position to cover the

RATIO SCALE
MILLIONS OF DOLLARS
3000



SALES AND REDEMPTIONS OF U. S. SAVINGS BONDS

greatly reduced budget deficit and to redeem war savings bonds and other maturing obligations for some time without new financing. In fact, for the first time since 1931, the Treasury was in position to reduce the public debt in 1946 from the rec-

TABLE V—OWNERSHIP OF U. S. GOVERNMENT SECURITIES
JUNE 30, 1945
(In millions of dollars)

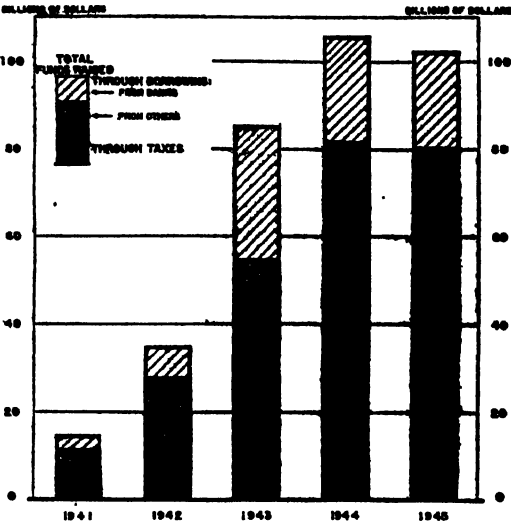
	Total Amount Outstanding	Banks	Life Insurance Cos	Fare, Casualty & Marine Ins. Cos	U. S. Govt Agencies & Federal Res Banks	All Other Investors
Treasury bills	17,041	2,799	4	*	12,905	1,273
Certificates of indebtedness	34,136	16,881	196	223	6,079	10,756
Treasury notes	23,497	16,318	405	196	1,737	4,841
Treasury bonds	106,448	50,840	17,735	2,157	7,081	28,636
Other bonds	196	17	*	1	35	143
Guaranteed issues	34	12	12	1	6	3
Total	181,353	86,867	18,353	2,577	27,904	45,652

* Less than \$500,000.

ord total of \$278,115,000,000 at which the national debt stood on December 31, 1945.

The outstanding feature of the Treasury's public debt management policy during the year was the increasing emphasis placed on certificates of indebtedness as a financing medium. The volume of Treasury bills outstanding was stabilized a little above \$17,000,000,000, with weekly offerings of \$1,300,000,000 of 91-day notes. The Federal Reserve banks absorbed the larger part of the bills outstanding, using this means to maintain liquidity while expanding their holdings of Government obligations to provide added reserves to member banks. Certificates of indebtedness were issued in greatly increased amounts, not only as part of the war loan drives, but also in exchange

TREASURY WAR FINANCING
SOURCES OF FUNDS RAISED



WHERE THE WAR MONEY CAME FROM

for maturing certificates, notes and bonds. Through greater use of certificates of indebtedness bearing a 7/8 percent interest rate, the Treasury is in position to keep down the average rate of interest, despite large issues of longer-term, higher-coupon obligations. The computed annual rate of interest on the national debt, which reached a low point of 1.919 percent in December, 1944, increased during 1945, reaching 1.965 percent in December. This gradual rise in the average interest rate provided an added incentive to the Treasury for using short-term obligations to a greater extent.

Through huge purchases of certificates of indebtedness, and the acquisition of longer-term securities in the open market, commercial banks

again added heavily to their holdings of Government securities and thus facilitated Treasury financing. In the fiscal year ended June 30, Federal Reserve banks increased their holdings of Government obligations by \$6,893,000,000 and commercial banks by \$15,500,000,000. The Federal Reserve and commercial banks combined thus absorbed approximately 39 percent of the increase in the public debt during the fiscal year 1945.

Table V shows the ownership of various types of Government securities on June 30, 1945, as reported by the United States Treasury.

As the year came to an end, financial circles throughout the country were deeply concerned with the postwar financing policy of the Treasury.

While no further increase in the public debt was in prospect for the near-term future, huge obligations were scheduled to mature. Maturities in the calendar year 1946, as of the end of 1945, were \$73,183,000,000, and in 1947, \$7,057,000,000, through sales of lower coupon issues, the Treasury could reduce further the cost of carrying the public debt. By continuing to favor sales of certificates of indebtedness, the outstanding supply of longer-term issues could be reduced, thus raising their prices and permitting a reduction in coupon rates on such issues. Spokesmen for banks and insurance companies decried such a policy, on the ground that it would encourage banks to hold too large a part of the public debt and would artificially depress the whole structure of interest rates.

Government Corporations. While government-owned corporations have been obtaining their funds directly from the Treasury in recent years, instead of issuing obligations of their own as formerly was the case, the size and scope of their operations have expanded greatly during the war. Congress enacted late in 1945 the Government Corporation Control Act, with the unanimous approval of both Houses. This law provides for an annual audit of the books of government corporations by the General Accounting Office. Wholly-owned corporations of the Federal Government, excepting the Tennessee Valley Authority, will have to submit annual budgets to Congress for review, revision, and possible rejection.

Furthermore, this law calls for specific authorization by Congress before any new Federal corporation may be established, and additional capital can be advanced to an existing corporation only by appropriation.

Enactment of this law was attributable in considerable measure to testimony before a Congressional committee by Jesse H. Jones, former head of the Reconstruction Finance Corporation, that the RFC had authority to lend, "any amount, for any length of time, at any rate of interest, to anybody."

JULES I. BOGEN.

PUBLIC HEALTH SERVICE, U.S. The United States Public Health Service, a unit of the Federal Security Agency, is the principal Federal agency devoted to protection of the nation's health. Its functions are: to extend and improve State and local health services through leadership, technical assistance, and the administration of financial aid; to protect the nation from the introduction of dangerous communicable diseases from abroad; to prevent the spread of communicable diseases from State to State; to seek the cause, prevention and cure for the diseases of mankind; to control the manufacture and sale of biologicals; to operate marine hospitals, and to disseminate public health information.

First established as the Marine Hospital Service in 1798 for "relief of sick and disabled seamen," the Service today provides medical care to all United States Merchant Seamen, Coast Guard, Public Health Service Commissioned Corps, field personnel and their families, as well as certain beneficiaries in other government agencies. In July, 1944, an Act reorganized the Service and codified all the existing health legislation and titles of authority into one basic law.

Groups serving as advisory boards to the Public Health Service are the National Advisory Health Council and the National Advisory Cancer Council, specifically authorized by the public health law. These Councils consult with and make recom-

mendations to the Surgeon General in matters concerning grants-in-aid, grants for general research, health activities, and functions of the Service. Other advisory boards are the Sanitation Advisory Board, Advisory Committee to the Division of Nurse Education, Board for the Control of Biological Products, Advisory Council on Nervous and Mental Diseases, Mental Hospital Survey Committee, Committee of Consultants in Dermatology, Committee on Post-War Training of Public Health Personnel, and the United States Public Health Service Advisory Committee on Public Education for the Prevention of Venereal Disease.

Appropriations for the fiscal year ended June 30, 1945, totaled \$129,007,715. On June 30, 1945, there were 635 regular corps members, 2501 members of the reserve corps on active duty, and approximately 13,375 civil service employees.

The Service is administered through 4 bureaus: the Office of the Surgeon General, National Institute of Health, Bureau of Medical Services, and the Bureau of State Services. Eleven District Offices carry on the field activities under the direction of a commissioned medical officer. Eight of these Offices are in continental United States, one each in Alaska, Hawaii and Puerto Rico.

Office of the Surgeon General. The Surgeon General, Dr. Thomas Parran, maintains general supervision over all the operations of the Service. Five divisions operating within his Office are: Commissioned Officers, Dental, Sanitary Engineering, Nurse Education, and Public Health Methods.

The Division of Commissioned Officers is responsible for recruitment, appointment, promotion, transfer, training, retirement, and all related work concerning commissioned personnel and interns. On June 21, the President declared the commissioned corps of the Service a military service and a branch of the land and naval forces of the United States for the duration of the emergency.

The Dental Division has general professional supervision over all dental activities of the Public Health Service and over all dental officers assigned to duty with other governmental agencies.

Sanitary Engineering continued the enforcement of regulations providing for the safety of water, milk and food, and general sanitary facilities of common carriers engaged in interstate traffic. It has given special attention to the supervision of health and sanitation services in war and industrial areas, assigning professional and technical personnel to State health departments. All vessel sanitation activities are under the supervision of this Engineering Division. Comprehensive milk sanitation surveys were conducted in 42 communities in cooperation with State authorities.

Nurse Education achieved its wartime goal of assuring "a supply of nurses for the armed forces, governmental and civilian hospitals, health agencies, and war industries" through the United States Cadet Nurse Corps. On July 1 the Corps completed its second successful recruitment campaign for which the goal was 60,000 new student nurses. Actual enrollments totaled 61,471. From the inception of the Corps in July, 1943, to June, 1945, some 16,000 Corps members were graduated. The added strength of nursing personnel is revealed by a comparison of 1942 enrollments in schools of nursing, 91,457, with the 126,576 enrollment in 1945. In accordance with the recommendations of the President and Congress, October 15 was set as the final date for new admissions. Total Corps strength on that day was 117,000. Under Public Law 74, provisions were made that these Cadet Nurses would be carried through to graduation.

Public Health Methods evaluates national health problems, develops methods to meet them, and disseminates health information to professional groups and the public.

The Division compiles and analyzes data on the nature and amount of sickness and death, and on the facilities and professional personnel available to meet health needs. It conducts statistical studies in the field of health economics, including methods for training personnel. During the year many special studies and research projects were carried on. These included studies of hospital insurance plans, and a survey of medical facilities and services for children. The hospital insurance study appraised the advantages and limitations of many such plans in the United States and ascertained the role they may play in bringing adequate health service to the entire nation. In the survey of medical facilities and services for children, the Service and the Children's Bureau of the Department of Labor cooperated with the American Academy of Pediatrics in a nation-wide study to determine the public health and medical needs of children. In cooperation with the National Foundation for Infantile Paralysis, a study is being made to provide quantitative means for measuring muscle strength in order to evaluate various methods of therapy. The Division also cooperated with the War Service and Postwar Planning Committee of the American Dental Association in the analysis of a questionnaire directed to all dentists serving the armed forces in an attempt to determine the future plans of Army and Navy dental officers. Significant numbers expressed the intention of moving to States where the ratio of dentists to population is already favorable. A definite trend away from rural areas was revealed. The Division publishes *Public Health Reports*, a weekly journal of scientific research. This includes current statistics on the incidence and geographic distribution of disease in the United States and throughout the world. The Division carried on intensive programs in health education. Educators were trained and assistance of an educational nature was given to States that requested such help. Information on Negro health work was continued through lectures, sermons, motion pictures, exhibits, clinics, and other health demonstrations.

National Institute of Health. The National Institute of Health is the research bureau of the Service, operated through 8 units: the National Cancer Institute, the Division of Infectious Diseases, of Physiology, the Biologics Control, Chemistry, Industrial Hygiene, Pathology, and Zoology Laboratories.

The National Cancer Institute conducted clinical and laboratory investigations in cancer. Grants-in-aid totaling \$140,043.44 for 19 research projects were approved in 1945. Since 1938, cancer has ranked next to heart disease as the chief cause of death in the nation.

Among the outstanding contributions of the Division of Infectious Diseases was the development and production of a typhus vaccine so safe and effective that there were no deaths from epidemic typhus among U. S. military personnel despite exposure in North Africa, the Middle East and Italy. The Division also produced an improved, safe, yellow fever vaccine for the armed forces. The Rocky Mountain Laboratory at Hamilton, Montana, continued the preparation of these vaccines as well as that for Rocky Mountain Spotted Fever. The Division also conducted studies on tsutsugamushi disease (scrub typhus), mumps, tularemia, rheumatic fever, tuberculosis, diarrhea, dysentery, food poisoning, and malaria.

The Division of Physiology concentrated on: development and use of new drugs to combat fatigue, control of dental caries and related oral diseases, physiology of the aging process, and physiology and biochemistry of faulty or inadequate nutrition.

The Biologics Control Laboratory continued testing the sterility, toxicity and potency of biologics—a function delegated to the Service by acts of Congress. To insure the quality of products, 53 domestic and 3 foreign laboratories were inspected.

The Chemistry Laboratory studied the carbohydrates to determine their structure, synthesis, and physiological action. The laboratory also cooperated in studies of pharmaceuticals for the treatment of malaria, filariasis, schistosomiasis, and other tropical diseases, and investigated biologics for certification.

To safeguard workers, the Industrial Hygiene Laboratory carried out studies of the hazards of the chemical components and end products of industrial processes to determine the engineering and medical control procedures. As a result of DDT studies for toxicity and potential dangers to human beings and warm blooded animals, directives were defined for the protection of persons engaged in its manufacture as well as for its utiliziers. There were only 22 deaths during the entire war period among the thousands of workers handling TNT in ammunition plants. This record, a direct result of a comprehensive program, is in contrast to that of the first World War when TNT poisonings caused 475 deaths in a period of about 8 months. In aviation medicine, the protection of pilots who must maintain efficiency under varied and exacting flying conditions required research into clothing, safety devices, and breathing equipment.

The Pathology Laboratory conducts investigations in the various fields of clinical and laboratory pathology and also the greater part of the pathological examinations for other laboratories of the National Institute. The Laboratory concentrated its work in three major research areas: dietary deficiency and toxicology, pathology of infectious diseases, and improvement of laboratory techniques.

The Zoology Laboratory is concerned with diseases caused by protozoan and worm parasites. Studies included research on carriers of the parasites (insects, water, snails) and methods of controlling such carriers. Tests for speedy diagnosis of rare diseases are completed within 24 hours and results wired back to the source so that patients may be treated correctly and promptly, confusion with more common diseases avoided, and the spread of the disease prevented. Specimens come to the National Institute at Bethesda, Maryland, from all over the world, for tests which give early and accurate diagnosis. This National Institute of Health is the only laboratory in the world offering such complete testing service.

Bureau of Medical Services. The Bureau of Medical Services is responsible for: all foreign and insular quarantine activities; medical inspection of aliens; medical services rendered to beneficiaries of the Service; administrative supervision of officers assigned to certain governmental agencies and of medical care services conducted with other governmental agencies. These responsibilities are discharged by the Hospital, Mental Hygiene, and Foreign Quarantine Divisions, Office of Nursing, and Medical Care in Other Agencies.

The Hospital Division administers 26 Marine hospitals, the National Leprosarium, the Sheepshead Bay Hospital for trainees of the Maritime Service, health and medical activities for the Coast

Guard, and the supervision of Freedman's Hospital for Negroes in the District of Columbia. The largest volume of medical relief in its history was furnished during 1945, with a total number of inpatients of 98,300, 81 percent more than in 1939. Applying for treatment in the out-patient department were 329,000, 70 percent more than in 1939 and 22 percent more than in 1944.

The Mental Hygiene Division, in order to determine the mental health needs of the States, continued its work of surveying public mental health hospitals. Seventy-one institutions in 20 States were studied in 1945. The Hospital in Fort Worth, Texas, operated by the Mental Hygiene Division, established a notable record. In the treatment of 2,559 psychotic patients from the military forces, approximately 80 percent of the patients were released as cured in six months, although many of these were sent back to their home communities with the recommendation that psychiatric supervision and counsel be continued.

The Foreign Quarantine Division administers the quarantine laws of the United States to prevent the introduction of quarantinable diseases—anthrax, cholera, leprosy, plague, psittacosis, smallpox, typhus, yellow fever,—from foreign ports into the United States and its insular possessions. The Division also provides medical consultation to the immigration service at home and abroad. Quarantine activities of the past year show the following percentage increases over the previous year: inspection of planes arriving, 77 percent more; vessels inspected, 39 percent; vessels fumigated, 25 percent; examination of passengers from planes, 83 percent; vessels, 77 percent; and crews from vessels, 32 percent. Quarantine regulations were changed so that ships fulfilling all quarantine requirements of the Hawaiian Islands group or the Puerto Rican group are no longer required to stop for a second quarantine examination at a continental United States port.

Medical Care in Other Agencies broadened and accelerated its work through cooperation with other agencies, official and voluntary health groups, and social welfare agencies and educational organizations.

Bureau of State Services: This Bureau brings together in one organization all those programs administered by the Public Health Service with the State and Territorial Health Departments. It includes the States Relations Division, Office of Public Health Nursing, Venereal Disease, Industrial Hygiene and Tuberculosis Control Divisions.

The States Relations Division assists State and local health departments in such major areas as the prevention of the spread of communicable diseases, dental health, plague control, malaria control, and drainage. A major responsibility is the administration of grants-in-aid to States. Allotments and payments increased from \$8,000,000, first authorized in 1936, to \$21,765,800 in 1945. The latter sum was divided—\$10,913,490 for general health, \$9,482,196 for venereal disease control, and \$1,370,114 for tuberculosis control. A wartime activity which still continues is the Emergency Health and Sanitation program. \$37,039,062 was appropriated directly to the Public Health Service for the administration of interstate quarantine, prevention of epidemics, and industrial hygiene activities as well as the assignment each year of between 300 and 400 professional personnel to State health departments.

Plague control was administered by the Plague Suppressive Measures Unit of the Division. This unit assisted States and municipalities in planning

and carrying out programs for rodent control.

Malaria control was handled by the Office of Malaria Control in War Areas. Beginning in July, the activities of this Office were expanded to include typhus, dengue, and pest control. In 13 Southern States the Public Health Service supplied men and equipment for the spraying with DDT of 300,000 houses located in malarious areas. Another disease and pest control program of the Office was *Aedes aegypti* control, instituted as a precaution against the reestablishment of dengue or yellow fever in this country.

The Hospital Facilities Section assists and cooperates with States, territories, communities, public and private institutions, organizations and Federal agencies in the development of adequate and improved physicians' facilities, standards, programs and operational details of hospitals, health centers, clinics and related activities.

The Tuberculosis Control Division was established on July 1, 1944, to assist State Health Departments in improving tuberculosis control methods. Assistance is given by financial grants-in-aid, by loan of technical and professional personnel, and by demonstration of techniques and methods. Objectives are: (1) case-finding; (2) expansion of sanatorium facilities, hospitals and clinics; (3) vocational rehabilitation; (4) adequate financial assistance to dependents of the tuberculous breadwinner. State Health Departments received from the Division \$5,200,000 in federal funds for improved tuberculosis control; and the services of 67 medical officers, 27 public health nurses, 4 sanitarians, and 16 reporting methods analysts. In addition, consultants were available in the fields of social service, vocational rehabilitation, vital statistics, sanatorium planning, health education, X-ray techniques and special research. Twenty-one photofluorographic X-ray units, utilizing miniature roll film, traveled through 30 States, demonstrating and assisting in tuberculosis case-finding. Case-finding programs demonstrate that 11 persons in every 1,000 apparently healthy adults have X-ray evidence of reinfection tuberculosis. About one-fourth of those found infected required immediate medical supervision.

The Venereal Disease Division investigates the cause, treatment and prevention of such diseases so as to cooperate with State departments of health for prevention and control within the States; and to prevent the spread in interstate traffic. Four important developments were: recognition that intensive treatment should be made an integral part of the long range control program; methods whereby treatment of gonorrhea with penicillin combined with the use of other drugs can be completed in a few days, intensive community-wide programs of public education, mass diagnosis, and treatment conducted in three large cities; the consideration of local, national and international control by the National Conference on Postwar Venereal Disease Control. Admissions to 2,500 clinics treating venereal disease totaled 278,369 cases of syphilis, a decrease of 22 percent over 1944, and 200,176 cases of gonorrhea, a 36 per cent increase. Rapid treatment centers admitted 61,898 cases of syphilis and 67,326 cases of gonorrhea. Fifty-four of these centers were operated by the Public Health Service and State health departments for the intensive treatment of syphilis. Gradually the Rapid Treatment Centers are being taken over by the States and cities. They have reduced the average stay of patients from 24 days to about 11 for syphilis, and from 18 to 3 days for gonorrhea, and are now treating approximately 180,000 patients a year.

Public Health Nursing has general supervision over all nursing operations of the Bureau of State Services. The Chief of the Office acts as adviser to other Divisions and to district offices. On June 30, 478 nurses and nurses' assistants were employed by the Bureau Divisions, 7 in the central office and 471 in the field services.

Industrial Hygiene continued its program for the protection and improvement of the health of industrial workers. Between 400 and 500 million working days were lost as a result of all types of disability. Industrial health problems have increased in complexity because of the many changes in the labor force, in materials and methods of production, and in working, home, and community conditions. The Division provides consultative service to State and local industrial hygiene organizations. All industrial areas were visited and services were concentrated in highly industrialized States like New York, Massachusetts, Illinois, Michigan, and Ohio. By June there were 49 active official industrial hygiene units of State and local governments located in 39 States. Approximately 375 professional and clerical personnel were engaged in industrial hygiene work in these units. In addition, there were on loan to the States from the United States Public Health Service 57 physicians, engineers, chemists, and nurses.

THOMAS PARRAN.

PUBLIC ROADS ADMINISTRATION (PRA). An agency of the U.S. Government under the jurisdiction of the Federal Works Agency. It normally administers Federal-aid funds and emergency appropriations for road construction, cooperating with State highway departments. It cooperates with the Department of Agriculture on forest roads and supervises the construction of national park roads.

With the beginning of war, approval of new projects was limited to those of direct importance to the war effort. Available Federal-aid funds and \$150,000,000 authorized under the Defense Highway Act of 1941, supplemented on July 2, 1942, by \$110,000,000, and on Apr. 4, 1944, by an additional \$30,000,000 were used to build access roads to Army and Navy training and concentration areas, war industries, and sources of raw materials. The Federal-Aid Highway Act of December 20, 1944, authorized the use of \$500,000,000 for needed highway improvements and to provide employment during the first 3 postwar years. A National Interstate Highway System to connect metropolitan areas and industrial centers and to serve the national defense was designated. Other plans included the development of secondary road systems in the various states and the modernization of various sections of the Federal-Aid system.

The organization is cooperating with the countries of Central America in closing gaps in the Inter-American Highway between the southern border of Mexico and the Panama Canal.

Commissioner in 1945: Thomas H. MacDonald. See BRIDGES; ROADS.

PUBLIC WORKS ADMINISTRATION (PWA). A government agency under the jurisdiction of the Federal Works Agency, now liquidated. The last appropriation was made in 1938. (See YEAR BOOK for 1940.)

PUERTO RICO. A West Indian island, forming a Territory of the United States; acquired from Spain through the Treaty of Paris, 1898. The adjacent islands of Vieques, Mona, and Culebra are included in its jurisdiction. The area of Puerto Rico is approximately 3,435 square miles.

Government. Under the Organic Act that was passed by the U.S. Congress in 1917 and later amended, Puerto Rico has the status of an organized territory of the United States. Its citizens are U.S. citizens. The executive power of the Territorial Government is vested in a Governor (Rexford C. Tugwell) who is appointed for an indefinite term by the President of the United States, subject to confirmation by the U.S. Senate. The legislative power is vested in a Legislature of two houses which is elected by popular vote for a 4 year term. In addition, there is a Resident Commissioner (Jesus T. Pinero) to the United States who is elected by the popular vote for a four-year term.

Events, 1945. The future political status of Puerto Rico has been the subject of discussion throughout the year by the Puerto Rican Legislature, the U.S. Congress, and President Truman. Early in March a majority of the Puerto Rican Legislature cabled to Senator Tydings an endorsement of his bill for Puerto Rican independence. Senate Bill no. 1002 provides for a referendum being held on the island so that the populace will have an opportunity to express their choice on: (a) Independence with economic amendments as suggested by a Legislative Commission (b) Statehood and (c) Dominion Status. President Truman has also proposed "that an early opportunity be given to Puerto Ricans to reinforce their local government and to settle by free choice their future relationship with the United States."

During 1944 there were 719,759 registered voters in Puerto Rico and 591,978 votes cast. The Popular Democratic Party, which won 17 out of 19 seats in the Senate and 37 out of 39 seats in the House of Representatives, received 383,280 votes, while the Union Republican Party received 101,779 votes and only one seat in the Senate and House. The Socialist Party received 68,107 votes and one seat in the Senate and the Liberal Party received 38,630 votes and one seat in the House. As a prelude to independence, Dr. Rafael Soltero Peralta, Chairman of the Puerto Rico Pro-Independence Congress, asked for a seat for Puerto Rico at the United Nations Security Conference held in San Francisco.

The Puerto Rican Land Authority has been authorized by the Puerto Rican Legislature to purchase or take an option on the land holdings of any corporation owning more than 500 acres. A working fund of \$21,000,000 has been appropriated by the Legislature for this purpose. An option to purchase the land holdings of Russell and Company has been taken and the Legislature's application for an extension of its option on the lands of the Fajardo Sugar Company was approved by stockholders of the company. The legality of these land acquisitions and the 500-acre limitation on land holdings is still being contested by various corporations on the island.

Population. As of July 1, 1944, it was estimated at 2,037,255 as compared with 1,869,255 in 1940. During the 1940 census, dwellers in places of 2,500 or more numbered 566,357 and the rural population 1,302,898. The territory had 544.2 inhabitants to the square mile—an exceptional density for an area dependent mainly on agriculture. Chief cities: San Juan (capital) 169,247 inhabitants, Ponce 65,182, Mayaguez 50,376. Seventy-six percent of the people are native-born whites and the remaining 24 percent are for the most part Negroes and Mulattoes. During 1943 there were 77,304 births and 29,019 deaths.

Education. Out of more than 700,000 children of school age, only 302,806 were enrolled in the pub-

lic schools during the fiscal year 1943. Of the total enrollment, 155,899 were in rural zone schools and 146,907 in urban zone schools. There were 7,088 field personnel and teaching positions in the Puerto Rican School System. The University of Puerto Rico located at Rio Piedras, ten miles from San Juan, had 6,060 students in 1943-44.

The Economy. The island is predominantly agricultural, with about 825,000 acres under cultivation out of a total area of some 2,000,000 acres. The two leading export products are sugar and tobacco followed by fruits and coffee. Lack of shipping space has curtailed exports of fruits and coffee. Shipments of domestic and foreign merchandise from the United States to Puerto Rico in 1943 and 1944 amounted to approximately \$87,000,000 and \$119,000,000 while shipments from Puerto Rico to the United States amounted to \$99,000,000 and \$123,000,000, respectively.

Sugar shipments from Puerto Rico accounted for \$45,000,000 and \$53,000,000 while rum shipments accounted for \$24,000,000 in both years, and tobacco, \$12,000,000. In 1943-1944 there were 723,611 short tons of sugar produced, 15,000 short tons of tobacco and 11,000 short tons of coffee.

Needlework is the largest industry of the island not associated with agriculture and during 1943-44 exports totaled approximately \$14,500,000.

CHARLES F. REID.

PUERTO RICO RECONSTRUCTION ADMINISTRATION (PRRA). A division of the U.S. Department of the Interior, established in 1935. With funds aggregating approximately \$70,000,000 it has conducted a broad program of work relief projects to increase employment in Puerto Rico, with emphasis on rural rehabilitation of needy persons. No further appropriations were made by the Seventy-eighth Congress and during the fiscal year 1945 only limited projects were under way. Administrator: Benjamin W. Thoron.

PULITZER PRIZES. A series of annual awards established in 1915 by the will of Joseph Pulitzer, publisher of the New York World. On May 7, 1945, the following awards were made by the Trustees of Columbia University on the recommendation of the Advisory Board of the Graduate School of Journalism:

Prizes in Journalism: (1) For the most disinterested and meritorious public service rendered by an American newspaper, a gold medal costing \$500: *The Detroit Free Press* for its investigation of legislative graft and corruption at Lansing, Mich. (2) For distinguished correspondence, \$500: Harold V. Boyle of the Associated Press for his chronicling of the human side of the war. (3) For telegraph reporting on international affairs, \$500: Mark S. Watson of *The Baltimore Sun* for distinguished reporting in 1944 from Washington, London, and the European war fronts. (4) For telegraph reporting on national affairs, \$500: James B. Reston of *The New York Times* for his news dispatches and interpretative articles on the Dumbarton Oaks Security Conference. (5) For local reporting, \$500: Jack S. McDowell of the *San Francisco Call Bulletin* for his articles on blood donation. (6) For news photography, \$500: Joe Rosenthal of the Associated Press for his photograph of marines raising the United States flag on Mt. Suribachi, Iwo Jima. (7) For distinguished editorial writing, \$500: George W. Potter of *The Providence Journal-Bulletin* for various editorials, especially those on the freedom of the press. (8) For distinguished service as a cartoonist, \$500:

Sgt. Bill Mauldin of United Features Syndicate, Inc. for his bitter cartoon of an American soldier escorting German prisoners. (9) A special journalism citation commending the "cartographers of the American press, whose maps of the war fronts have helped notably to clarify and increase public information on the progress of armies and navies engaged."

Prizes in Letters: (1) For a distinguished novel published during the year by an American author, preferably dealing with American life, \$500: *A Bell for Adano* by John R. Hersey (Alfred A. Knopf, Inc.). (2) For an original American play, performed in New York, preferably dealing with American life, \$500: *Harvey* by Mary Chase, produced by Brock Pemberton. (3) For a distinguished book of the year upon the history of the United States, \$500: *Unfinished Business* by Stephen Bonsal (Doubleday, Doran & Co., Inc.). (4) For a distinguished American biography, \$500: *George Bancroft: Brahmin Rebel* by Russel Blaine Nye (Alfred A. Knopf, Inc.). (5) For a distinguished volume of verse, \$500: *V-Letter and Other Poems* by Karl Shapiro (Reynal and Hitchcock, Inc.).

Prize in Music: For distinguished musical composition, \$500: *Appalachian Spring* by Aaron Copland, a ballet written for and presented by Martha Graham and her company at the Library of Congress in Washington in October.

Annual Scholarship: To an art student in America certified by the National Academy of Design, \$1,500: Vincent de Gregorio, New York City.

RACING. The year 1945 started off in a complete blackout for racing. From Jan. 2 until May 12 every track in the country remained closed at the request of James F. Byrnes, then Director of War Mobilization and Reconversion. But as the year ran its course, the sport of kings rose from this Stygian darkness to the brightest heights in turf history. Although no Man O'Wars were uncovered to dazzle the imaginations of turf followers, attendance and betting figures soared to astronomical figures.

Money flew thick and fast as racing, greatest beneficiary of inflated earnings, mushroomed into America's most lucrative sport. The racers came out of hiding with V-E Day and tracks reopened in Illinois and Rhode Island on May 12. From then on, lost time was made up and midway through the summer it became apparent that racing was speeding to its most successful campaign.

On Memorial Day ten tracks played to 333,195 customers, who poured the staggering sum of \$13,476,021 into the mutuel machines. Million-dollar betting days once were only dreams, but in New York \$3,000,000 afternoons became almost routine and \$4,000,000 days were frequent. Then on Sept. 22, at Belmont Park, spectators bombarded the machines with a total of \$5,016,745, the highest in history.

Although the number of racing days was reduced 25 percent by the blackout early in the year, attendance neared 25,000,000 and wagering came close to a billion and one-half dollars as compared to 18,000,000 and \$1,126,308,645 in 1944. In New York alone, the total bet was \$450,663,190, with a return to the State treasury of \$30,333,299. These record figures were returned in spite of the fact that there were only 154 days of racing in the Empire State as compared to 189 the year before, when a total of \$410,230,402 was wagered.

Louis B. Mayer's Busher, a 3-year-old filly, was the horse of the year. The daughter of War Ad-

miral won 10 of 13 starts before being temporarily retired with an injury and she amassed \$273,735 in prizes, bringing her to seventh place among the all-time money winners with a grand total of \$334,035.

The Kentucky Derby, classic that survived the war years without interruption, proved a runaway for F. W. Hooper's Hoop Jr., who also finished second in the Preakness and won one-half of the rich Wood Memorial before an injury caused retirement. P. A. B. Widener's Polynesian annexed the Preakness and the Withers, but proved spotty thereafter. C. V. Whitney's Jeep was a victor with Hoop Jr. in the Wood, which was run in two sections.

Best 2-year-old filly was Beaugay, with Star Pilot the cream of the young colts. Fighting Step was a consistent winner among the 3-year-old colts and Styxie proved leader of the handicap horses.

The year saw a new stable gain prominence, the Main Chance Farm of Mrs. Elizabeth N. Graham of New York being the big winner. With the veteran Tom Smith as her trainer, Mrs. Graham invested \$299,700 in thoroughbred stock the previous year and the close of 1945 found her the leading money-winning owner with \$503,985, a sum that made Smith the top man among trainers. J. Dean Jessop, 19-year-old Utah youth, was the champion of jockeys, his total winning mounts nearing the coveted "300" mark as 1945 ended.

The usual number of doping cases were revealed, and turf fans were shocked late in the year when it was announced that the popular Tom Smith had been barred from racing for a year for an alleged stimulation of a horse named Magnific Duel. Smith denied all charges and filed an appeal, while his case became a cause célèbre to those who have followed his colorful career.

Racing took a decided step forward late in December when the Thoroughbred Racing Association announced the formation of a private protective agency. Spencer Drayton, fourteen years a member of the F.B.I., was named administrative organizer of the group, which is to have a free hand to deal with any practices that might prove harmful to the sport.

Harness-racing followed the pattern set by the turf and a record \$40,000,000 was wagered on the sulky drivers, \$28,000,000 being bet at the Roosevelt track in Westbury, L.I. The blue ribbon event of the harness world, the Hambletonian, returned to its original setting at Goshen, N.Y. Titan Hanover, 3-year-old bay trotting colt owned by E. Roland Harriman and Maj. Elbridge T. Gerry, who went on to become the trotter of the year, captured the Goshen classic in straight heats. In fact, Titan Hanover was such a standout that the public was not permitted to bet on him in the Hambletonian.

THOMAS V. HANEY.

RAILROAD RETIREMENT BOARD. An independent executive agency of the U.S. Government which administers a retirement system and an employment service system for railroad employees. For 1945 activities, see RAILWAYS. Chairman: Murray W. Latimer.

RAILWAYS. After the German surrender but before Japan had been beaten the New York Times said editorially:

"Passenger traffic this year is expected to reach the record total of approximately 105 billion passenger miles, five times the traffic of 1939 and two and a half more than the big year of 1918. This record is being made with 30 per cent less equipment than the railroads had in 1918

... Now, in spite of automobiles, trucks and airplanes, the railroads are hauling many more passengers with almost a third less equipment.

"The amount of freight is so stupendous that the average person cannot understand the railroading problems involved."

"In the face of man power shortage and shortage of equipment the railroads have done a prodigious job in the nation's greatest emergency."

While this was intended to sum up the entire war record of the railways it is an understatement of railway operation in 1945. By that year both the difficulties to be overcome and the work to be performed had accumulated in geometrical ratio. The mere number of persons employed and the number of units of equipment in service is not a full measure. Many of the persons were inexperienced and the equipment was in a condition that required more repairs than would have ordinarily been necessary.

Detailed figures are given below but general conditions are needed as a background.

Much of the financing of railways has been done when money cost from four to five per cent. During 1945 money cost about half that. Therefore much railway refinancing was done especially by companies having established earning power. What was done by the Chicago, Burlington & Quincy is the best example.

The Burlington received permission from the Interstate Commerce Commission to sell at 100 0399 an issue of \$65,000,000 first and refunding 3½% bonds due 1985. With the proceeds from this sale the Burlington paid off \$39,493,000 first and refunding 3½% bonds that would have become due in 1974 and also paid off a total of \$30,000,000 collateral trust bonds carrying 3½ per cent interest. The bonds were sold to a group of bankers headed by Morgan, Stanley & Co.

The saving in yearly interest was \$497,737.50. The premium received by the railway company was \$25,935. The bankers make their profit from the difference in price between what they paid, namely 100.0399, and the price they can get for a 3½ per cent railway bond.

This should be contrasted with Pennsylvania Railroad stock paying \$2.50 a share and selling on the New York Stock Exchange for \$45. Refinancing bonds with stock issues was quite out of the question for railways in 1945 although it was done to some extent by the Industrials.

Reorganizations. Nothing could have been more helpful than the low price of money in the reorganization of railways that were in, or on the verge of, bankruptcy. The Erie Railroad, which ever since Jay Gould's time has had a minus credit, on April 17, 1945, sold \$79,400,000 bonds with various due dates. The bonds carried a 3½% interest coupon. The cost of the money to the railway company varied according to due date from 3.15% to 2.09%. Proceeds received from the sale of the bonds are being used to redeem \$5,500,000 short term notes and the entire issue \$87,185,500 first consolidated 4% bonds due 1995 but callable at 105.

The Wabash Railroad, another railway with heretofore poor credit, sold in February \$47,000,000 first mortgage 3½% bonds due Feb. 1, 1971, at 98.38, a cost to the railway of 3.3436.

In the reorganization, total debt was cut down from \$152,658,769, the total in 1941, to a total of \$78,690 in 1945.

On February 19, 1945, the Pere Marquette Railway sold \$50,000,000 first mortgage 3½% bonds due 1980 at 99.71, a cost for money to the railway company of 3.383 per cent.

The Pere Marquette is the case of a railway subject to the minimum of competition from trucks and airplanes. It operates 1,949 miles, serving the state of Michigan, and connects Detroit with Chicago (in part over trackage rights) and Detroit with Buffalo (in considerable part over trackage rights). Thus its principal business is that of carrier for heavy industry. During the years 1942-44 there were 203 new industries established near the lines of the Pere Marquette.

Early in the year the Interstate Commerce Commission approved a reorganization plan for the Florida East Coast Railway. The total capitalization of the new company is to be \$41,166,000 of which only \$666,000 is to bear fixed interest charges and even this is equipment trust certificate debt.

While the financing done by the Virginian in April, 1945, was not a reorganization in the sense that it was revolutionary it was the culmination of an evolution that is significant as showing what was possible for a prosperous railway in that year. The railway company sold \$60,000,000 new first lien and refunding 3 percent bonds due in 1995 at 105.669. That was a cost of money to the railway of only 2.79 percent. It left the Virginian with a total funded debt of \$60,000,000 and \$27,955,000 cumulative 6 percent stock and \$31,271,500 common stock as capitalization for a company operating 657 miles of absolutely first class railway, of which 30 miles is double tracked; of the total operated, 138 miles is electrified. About 90% of the total freight carried is coal, something that neither truck nor airplane is likely to take away. That such a railway can get its money about as cheaply as one of the States could in 1945 is suggestive.

On March 1 the final decree in the reorganization of the Chicago & North Western Railway was signed. Ten years had been spent in putting through a satisfactory reorganization.

The Interstate Commerce Commission approved a second plan for the readjustment of the debt of the Baltimore & Ohio Railroad, the first plan approved by the I.C.C. having failed.

The fixed charges upon the termination of the new plan will be \$17,567,299 as compared with \$25,265,049 under the previous plan. The new plan has 20 years of "breathing spell" before the full fixed charges must be paid; the first plan had a maximum "breathing spell" of 8 years.

The developments of the year pretty well cleared up the most pressing financial problems of the major railways. The Seaboard Air Line was sold to a reorganization committee on May 31 and the Chicago, Milwaukee, St. Paul & Pacific was turned over to five trustees on Nov. 26.

So much stress has been laid on the financial condition of the railways because it is the judgment of railway officers that railways can hold their own against bus, truck and airplane competition if the only consideration be service rendered; but that the crucial questions are going to depend on the railways being able to get sufficient business of the kind they are especially fitted to handle to cover the cost of their necessarily heavy capital outlay.

The difference between future earning power of the Virginian, hauling three thousand-ton train loads of coal, and the earning power of the Seaboard Air Line, hauling perishable and commodity freight and doing a large, high class passenger business, was reflected in the railway financing of 1945.

Consolidations. It seemed almost as if the spot

light were thrown on the utter failure of all theoretical plans to consolidate railways when the Baltimore & Ohio announced late in May the withdrawal of claims against the Chicago & Alton. This permitted the consolidation of the C. & A. with the Gulf, Mobile & Ohio. The new railway system set up by this consolidation will give a 3,000 mile line connecting Chicago with the Gulf of Mexico and will bring competition into a territory heretofore served exclusively by the Illinois Central. The theoretical plans for consolidation were designed to promote cooperation. This actual consolidation creates cutthroat competition.

Details of Accomplishments. The ton mileage carried by the Class I railways of the United States in 1945 was 680,000,000,000. This is the equivalent of carrying 680 million tons from New York to Chicago. The passenger mileage was 91,000,000,000. This is the equivalent of carrying 91 million passengers from New York to Chicago.

This work was done despite a pernicious manpower shortage. On March 31 the United States Railroad Retirement Board said that it had unfilled orders for 94,738 railway employees which included 4,740 trainman, 156 enginemen and motormen, 1,379 firemen, 3,163 clerks, 8,011 freight and express handlers, 32,057 trackmen, 1,726 signal men, 482 linemen, 1,465 telegraphers, and 22 train dispatchers. It was estimated that on Feb. 15 out of a total of 1,400,000 employees there were 700,000 who had had no railway experience prior to Pearl Harbor.

The Railroad Retirement Board has done invaluable service in procuring and placing railway labor. For instance during the 11 months ended March 31 the Railroad Retirement Board procured and placed 27,482 veterans of World War II in railway service.

The manpower shortage becomes more impressive as its implications are studied. Perfectly maintained track is basic to safe railway operation. The shortage of 32,057 trackmen seems trivial, but, allowing 4 man to a mile for track maintenance, it follows that thirty-two thousand miles of railway would be unsafe but for extraordinary effort on the part of railway officers.

There are no complete figures for the shortage of railway mechanics but the inspection of even a few railway shops indicated the shortage was serious.

As early as January, 1944, over 30 percent of the freight cars in service in the United States had been built more than 25 years. The economical life of a freight car is less than ten years. The reasons for conditions in 1944 are to be found in the starving of the railways during the depression. By 1945 many cars and locomotives barely staggered through the day's work. Cars and locomotives in that condition came in for repair by inexperienced mechanics. It was under these conditions that railway operating officers showed at their best. The average mileage per car per day in 1945 was 52.3.

Earnings. Large revenue and heavy expenses resulted from the extraordinary movement of traffic, with a fairly large net for railway security holders and considerable over time wage payments to railway employees, but nothing except additional work and responsibility for railway officers.

Table I gives a combined income account for Class I railways of the United States (All those earning more than a million dollars a year.)

Table II gives the break-up of revenues and

TABLE I

	1944	1945
	(millions)	
Operating Revenues	\$9,437	\$9,146
Operating Expenses	6,282	6,620
Taxes	1,846	1,377
Net Railway op income	1,106	983
Fixed Charges	439	404
Net for Stock	667	579

* Includes bond interest and rentals.

TABLE II

	1944	1945
	(millions)	
Freight Revenue	\$6,999	\$6,809
Passenger Revenue	1,790	1,696
Mail Revenue	130	132
Express Revenue	144	149
All Other Revenue	374	378
Total	9,437	9,164

TABLE III

	1944	1945
	(millions)	
Maintenance of Way, etc.	\$1,263	\$1,327
Maintenance of Equipment .. .	1,587	1,602
Traffic	137	143
Transportation	2,974	3,020
General and Other.	321	328
Total	6,282	6,620

Table III gives the break-up of expenses.

In regard to the heavy expenses for maintenance of both equipment and way it is important to remember that these large dollar outlays do not represent equally large effective repairs. Unskilled workmen were paid skilled workmen's wages.

Motive Power. The three types of locomotives that were being tested in 1945 were (1) the Diesel-Electric, (2) Steam Turbine and (3) the Gas Turbine.

The Chicago & Alton put three 4,000 hp Diesel-Electrics in passenger service between Chicago and St. Louis. They are said to be giving very satisfactory service where smoothness of operation, speed and reliability are important factors in the keen competition for high-grade passenger business.

The Baltimore & Ohio put, on the Baltimore to Washington, D. C. run, a 2,000 hp Diesel-Electric. It was the first road-type, through service Diesel built by the Baldwin Locomotive Works in collaboration with the Westinghouse Electric & Manufacturing Co. The locomotive has two 1,000 hp eight-cylinder Diesel engines. The underframe, trusses, and sides of the locomotive are welded together to form the equivalent of a single piece of steel, giving greater resistance to impact and a minimum of vibration.

A direct-drive Steam-Turbine is now in service on the main line of the Pennsylvania Railroad. Its outstanding advantages are that it gives 20 per cent more power from a boiler than would a steam locomotive without the turbine. It is for use in both passenger and freight service. The total engine weighs 580,000 lbs. The forward tractive force is 70,500 lbs., the reverse 65,000 lbs. The most successful steam-turbine in use heretofore is that on the London, Midland & Scottish. It was placed in the London—Glasgow service in 1933.

The third type of motive power has been designed by the Allis-Chalmers Manufacturing Co. but is not in service as yet. It is a road locomotive of 4,800 hp. The over-all length is 90 ft. and the

weight is 450,000 lbs. The advantage claimed for this type of locomotive is that no water is required in its operation. The elimination of stops for water and the elimination of the costs of water facilities would of course be a major economy.

Orders for New Equipment. The needs for additional cars and locomotives is reflected only roughly in the orders placed in 1945, because the man who decides on the size and character of the order is not the man either using or repairing equipment. The most that the officer "at the front" can do is to make recommendations. How closely these will be followed depends on the price at the moment of various types, the price of money and so on.

The total number of locomotives ordered in 1945 was 856, of which 702 were Diesel-Electric. This compares with a total ordered in the previous year of 757. In 1944 the total was divided, steam 74 Diesel 680.

The number of freight cars ordered in 1945 was 39,039. Of this total 16,106 were box cars, 6,075 were gondola and 1,240 were flat cars. The total ordered in 1944 was 44,825 which included 23,860 box cars; 7,224 were gondola and 550 were flat cars.

The total number of passenger cars ordered in 1945 was 2,998 comparing with 715 ordered in 1944.

About the only significance of the figures for new mileage built is that they show that even under war conditions there were some needs for transportation great enough to require the use of man power and materials. The new mileage built in 1945 was 65 comparing with 121 miles built in the previous year. In both cases the mileage is that of first track. In 1887, the year the Interstate Commerce Commission was created, the new mileage of railway built was 13,081.

Less Than Car Load Freight. One of the weakest factors in American railway practice has been the handling of less than carload freight. That is easily explained. Loading coal into open top, 70-ton capacity cars and hauling it in 60-car trains to tidewater, where the car is picked up bodily and its contents dumped into the hold of a vessel, appeals to the American imagination. Stowing packages in a box car does not. However this "chicken feed" business is expensive and is of personal importance to thousands of the public, whereas the handling of coal is of remote interest to all but a few.

The Pennsylvania Railroad installed 25 Buda "Chore Boy" gasoline engine-powered platform trucks of 1,000 lbs. capacity at its 11th Street freight station at Pittsburgh in April, 1945. The investment was \$17,000 and the estimated yearly saving is \$27,000.

This is by no means the first experiment with power trucking, but it is the first *comprehensive* experiment on such a large scale. This station is the road's principal L.C.L. terminal in the Pittsburgh district. It is completely modern in its layout. L.C.L. freight from thirty miles around is assembled and sent out from here. The east side of the station is an inbound freight house, 80 ft. wide and 800 ft. long. The west side is 30 ft. wide and 800 ft. long. A total of 186 cars can be spotted on the eight tracks comprising the station layout. A round trip from the north to the south end of the station is nearly half a mile. The "Chore Boys" are operated by the truckers themselves, who ride with the load instead of walking and pulling the load. On an average run of light, bulky freight, a "Chore Boy" handles as much freight per trip as a hand

truck, at a much higher speed. Besides the increased speed there is the decreased strain on the trucker. At present there are an average of 65 women employed daily as truckers. For the future it is of importance that lightweight men or youths can be employed in this class of work.

It is as hard to convince railway executives of the importance of improvement in the "details" of L.C.L. handling as it is to overestimate its far reaching effect in a time of life and death competition with trucks and airplanes.

It has always been possible for railway employees to share in railway profits provided they can save enough to invest in railway stocks. However they have almost never done so. Now the Central Railroad of New Jersey has proposed a plan, which has been submitted to railway labor union leaders, for profit sharing without a deduction from wages. Details of the plan have not been made public but that such a plan is being seriously discussed is worthy of note.

Radio Telephone in Railway Operation. The Chicago, Rock Island & Pacific has undertaken the installation of radio-telephone train communication on the 160 miles of double track between Chicago and Rock Island. The railway is to use the ultra-high frequency waves (2,660 megacycles) with Klystron tubes. This opens up for possible railway use, a portion of the radio spectrum in which there are an enormous number of unused channels. The feature that is peculiar to railways is an assembly of platters or discs mounted on a short hollow tube only a few inches high, this being important where the clearance on cars and locomotives is limited.

For a considerable part of 1945 this type of equipment has been in regular service on one through-freight train operating daily between Rock Island and Kansas City. The advantages are that the ultra-high frequency is not subject to fade-out or "blind spots" under any adverse conditions such as tunnels, gorges or steel bridges.

British Railways. All during the "blitz," the flying bombs and rockets, the railways of Great Britain were kept open and, after a fashion, in operation by the exercise of remarkable ingenuity. The total number of bomb incidents to railway property was 13,891.

The standard procedure for bomb hits on track was to shovel by hand into the crater the material that had been blown out, and fill up with carloads of cinders brought from both sides of the break. Bulldozers could seldom be used because there was more often than not bomb damage somewhere between the crater being filled and the place where the bulldozer was. There was also an acute shortage of timber. A large amount of reinforced concrete was used either as a complete tie or as an isolated block under each rail.

German Railways. Col. John W. Wheeler, XVI Corps of Engineers, 9th U.S. Army, writing in the *Railway Age* about German Railways at the end of the War, says:

"The ability of the German Railways to continue to operate under terrific air attack prolonged the war for many months. . . .

"Over long periods of time the Allied air forces reported destroying great numbers of locomotives, cars, bridges, yards and terminals, but to our surprise the enemy kept on rolling . . . to the astonishment of all, when the Ruhr industrial district was captured there was found there and in Westphalia, just south of the Ruhr, hundreds of locomotives in good condition and thousands of cars—box cars, flats, gondolas, new refrigerators, coaches, and sleeping cars. True, the enemy had robbed the railroads of France, Belgium, and Holland. Even so, his losses were terrific over a period of months, and he still had motive power and cars aplenty when the end

came. The railways were finally put out of business by Allied air forces who cut rail in enough places [see British railways above] to prevent repair. Thereby they penned up the equipment until ground forces could overrun it. . . .

"In the final days of the struggle . . . the enemy destroyed very nearly all of his railway bridges, and on the Rhine he accomplished total destruction. All bridges such as the one at Dusseldorf were destroyed beyond repair.

"We merely repaired the lines we needed for our supply, but the railway people cooperated heartily and seemed anxious to get their lines back in operation."

Bridge Over the Rhine. A piece of railway construction that will probably stand for some time as a record was done at Wesel during the last of March, 1945. The work consists of a 1,752-ft. single track bridge over the Rhine, a 463-ft. bridge over a nearby canal, two miles of connecting track, and yards at Wesel and Buderich.

Construction began at 6 P.M. March 29, and was ready for traffic 10 days, 4 hours 45 minutes later. The work was done by U.S. Army Engineers and the Transportation Corps' Second Military Railway Service. The bridge is a 23-span, semi-permanent structure using meter-beams (rolled I-beams 39.37 inches in depth) developed by the Germans and rolled by them at a plant at Luxembourg. The weight of the bridge is 2,140 tons. A total of 780 Navy lighterage pontoons, each weighing 24 tons, were used during construction. In driving piling, five pile drivers were used continuously. All the equipment used in building the bridge originated in the United States. The materials were those nearest to hand. The officers and men of the 1056th Engineer Group were under the command of Col. James B. Cress, former regional director of the Railroad Retirement Board for the San Francisco Region.

Military Railway Service. In June this service consisted of 74 units and had a personnel of 1,147 officers, 45 warrant officers, and 25,490 enlisted men. Of the 74 units, there were 24 Railway Operating Battalions.

Brig. Gen. Carl R. Gray, Jr. in his official report says:

"When the Military Railway Service was organized and planned for, it was anticipated that each Railway Operating Battalion would operate up to a maximum of 150 miles and run a maximum of 24 trains in each direction. For the 24 operating battalions we have, this would amount to a total of 1,152 trains over a 150-mile stretch . . . this would produce 8,600 miles. . . . Instead of that, we operated over 25,120 miles . . . and instead of the estimated maximum of 1,152 trains, we actually operated on this particular day (June 7) 1,219 trains over 25,120 miles of track."

This was not a maximum day—the maximum day was June 25, when that division handled 1,958 loads and 653 empties, the net tons being 26,796.

France. The 723rd Railway Operating Battalion was about as much occupied in alleviating the condition of the liberated French people as they were in operating the railways of that devastated country. Originally they had but sixty miles of double track, but by March there were 120 miles of line and two major terminals. They did all the essential work of moving supplies and in addition established such things as soup kitchens proving "God-sends" to those who had been deprived of their sole means of support by the Germans.

Swedish Railway Electrification. This year was the 30th anniversary of the completion of the first electrified steam railway in Sweden.

The Swedish State Railways operates 6,990 miles of the country's total of 10,200 miles of railway lines. It is estimated that electrification has saved during the war 7,000,000 metric tons of coal. The cost of the coal would have been

\$137,500,000, whereas the cost of the electrical energy was about \$22,500,000. The electrified lines also permit the operation of faster and heavier trains. This is an indication of the saving by electrification where conditions for the generation of electricity are as favorable as they are in Sweden.

Rates. An American railway executive when in a pessimistic mood will tell you that his frontiers most needing defense are on the outskirts of Washington, D. C.

The Interstate Commerce Commission ordered, in 1945, a general increase of 10 percent in class rates applicable to Official territory and a general decrease of 10 percent in class rates applicable within and between Southern, Western Trunk-line, and Southwestern territories on one hand and Official territory on the other, subject to prescribed distance rates as minimum.

That readjustment of rates may be in accord with abstract justice, but it upsets railway earnings at a time when earnings are most uncertain, owing to the change over from war to peace conditions.

The U.S. Department of Justice has brought suit against the railway rate associations as being violators of the Sherman Anti-Trust law. The associations had for years been approved by the Interstate Commerce Commission as being reasonable devices for the stabilization of rail-freight rates. Stabilization is in the interest of shippers as well as railways.

WILLIAM E. HOOPER.

RAPID TRANSIT. Local urban and suburban transportation in the United States appears to be in a transitional stage, with many changes pending, but checked by problems of finance and management. Some improvement projects include municipal ownership, but there is no decided trend in that direction, largely because of the possibilities of political influence. Total local transportation traffic of 1945 in the United States was estimated at slightly under 23-billion riders, as compared with 23,017,000,000 in 1944. These figures cover electric street railways, elevated and subway lines, inter-urban electric railways, and motor bus and trolley bus lines; they do not include taxicabs or suburban services of railroads.

Further decline in total traffic is considered inevitable in the early stages of the postwar period, as restrictions on automobiles are relaxed. Reduced mileage of street railways is also anticipated; it has declined already from 25,470 miles in 1935 to 16,860 in 1945. Elevated and subway lines increased from 1,230 to 1,252 miles, and bus lines have increased enormously. Electric railways total 9,412 miles of line (or route), with 18,112 miles of track. Of these, 382 route miles (with 1,252 of track) are subway and elevated lines. Trolley bus lines total 1,164 route miles; motor bus lines have 87,700 miles of round-trip routes. Of the passengers, 12,137,000,000 were on electric lines (including 2,621,000,000 on subway and elevated lines); 1,234,000,000 on trolley busses and 9,646,000,000 on motor busses.

Employees number 242,000, with a pay-roll of \$599,000,000. Total revenue reached the all-time record of \$1,362,000,000, an increase of 5.28 per cent over 1943; but operating expenses increased 8.48 per cent and took 74.29 per cent of the revenue. Equipment included 37,285 electric cars (10,105 on subway and elevated lines), 3,555 trolley busses and 48,400 motor busses. This equipment is inadequate for the traffic, and much of it is old, but it will take some time to acquire the needed new cars and busses.

Traffic congestion in busy streets and the desire to expedite the movement of street cars are main reasons for the increase in subways and the plans for further increase (as at Cleveland, Detroit, Washington, New York, Montreal and Toronto). While subways would expedite the travel of street cars they would not greatly reduce traffic congestion, and might result in reduced volume of traffic on the cars, owing to the longer distances between stops and the inconvenience of stairways. On the other hand, removal of tracks from the streets, as at Seattle and other cities, may expedite all traffic by giving a clear roadway. Busses also have the advantage of taking up passengers and setting them down at the curbs. Traffic congestion may often be relieved by regulation of movements and more strict control of street parking. Marked improvements expected in new cars and busses include capacity, comfort, convenience, heating, lighting, air conditioning, ventilation, and smooth or noiseless riding.

At Boston there is a project for taking over all local transport services (surface, elevated and subway) and all railway suburban services within a radius of 12 miles, and operating the whole system as a unit. The plan is somewhat similar to that of the London Passenger Transport Board (England), which has been in operation for some years. In New York, the Bureau of Transportation has a 6-year improvement project, including a Second Ave. subway to the Bronx and a 72d St. crosstown subway with tunnel under the East River. The bus terminal proposed by the New York Port Authority, adjacent to the Lincoln Tunnel entrance is reported approved by some 30 bus lines coming in from the west. It would be 200 x 800 ft. (40-41st Sts. and 8th and 9th Aves.), with a flat roof for helicopter planes. A downtown subway for street cars is proposed in Los Angeles.

A municipal ownership project at Cleveland, Ohio, includes a 15-mile east-west line and a 2-mile downtown subway; all street cars to be replaced by busses, with express service on some bus routes. An important step in solving the complicated situation at Chicago was the passage, by the State legislature (April 12), of the Metropolitan Transit Act. Under this Act Chicago adopted an ordinance giving an exclusive franchise to the Chicago Transit Authority (April 23). The ordinance was approved by referendum vote (June 11). The Chicago Transit Board of 7 men (four named by the Governor and 3 by the mayor) was appointed June 28 and accepted the franchise on July 10. It adopted the city plan to purchase the Chicago Rapid Transit Co. (elevated lines) for \$75,000,000, and the Chicago Surface Lines for \$12,162,000. Both concerns are in bankruptcy and under the jurisdiction of the Federal court. The Authority also plans to purchase the Chicago Motor Coach Co. The validity of the State Act has been endorsed, but there are financial and other difficulties still to be faced. Work on the city's Dearborn St. subway (80 per cent completed) is to be resumed in 1946.

Many of the bombed cities in Europe kept street-car and subway lines in operation to some extent. Toronto plans a shallow subway for street cars, and also a bus terminal. Glasgow, Scotland, has plans for a subway. In Berlin, several of the subway lines and stations (used as shelters and as military repair shops) have been restored to service. A 6-mile subway system at Kiev, Russia, is reported under construction, to connect the center of the city with three suburban areas. A subway at Johannesburg, South Africa, serves the

new railway station, which has its tracks 20 ft. below the street level and a flat roof to carry the street-car tracks. At Rio de Janeiro, a 5-mile underground railway (main line and 2 branches) is proposed as an extension of the electric suburban line of the Central Railway of Brazil.

A traffic study by the General Electric Co. is based on the number of passengers rather than number of vehicles. Taking a 60-ft. street, with no parking, the results are: (A) with automobiles only, the maximum capacity in one direction is 2,115 cars per hour, or 3,700 passengers, all seated; (B) with automobiles and busses, 1,215 automobiles (2,130 passengers) and 180 busses (7,200 seated or 9,000 seated and standing) making a maximum total of 11,130; (C) with automobiles and street-cars, the automobiles still number 1,215 (2,130 passengers), but 150 street cars carry 9,000 seated or 13,500 with standees, thus giving a total of 15,630 passengers per hour. Automobiles in city traffic average 1.75 persons per car. Standing passengers in busses average 25 per cent of the number seated, while in street cars they average 50 per cent of the number of seated passengers. Thus maximum rush-hour capacity on this street would be 3,700 people with automobiles only, or 11,130 with automobiles and busses, or 15,630 with automobiles, busses and street cars. See MOTOR VEHICLES.

E. E. RUSSELL TRATMAN.

RECIPROCITY INFORMATION, Committee for. A committee created under the provisions of Section 4 of the Trade Agreements Act of June 12, 1934, which provides that before a trade agreement is concluded with any foreign government interested persons shall have an opportunity to present views to the President or to such an agency as the President may designate. The Committee was created as such an agency, and in 1936 its functions were extended to include receipt of statements with reference to any aspect of the trade agreements program. In 1939 it was placed under the jurisdiction of the Department of State. The agencies and departments represented in the membership have changed from time to time. Chairman: Lynn R. Edminster.

RECLAMATION, Bureau of. A bureau of the U.S. Department of the Interior, which conducts multipurpose irrigation projects in the West. Its 52 projects, 179 dams, and 30 power plants (with an installed capacity of 2,203,962 kw) have created homes for a million people on 4,000,000 acres of irrigable land. Power and municipal water operations serve an additional 4,000,000.

During the fiscal year 1944, plants on Bureau projects produced more than 9,500,000,000 kw-hr of electrical energy. Leading the plants supplying power for war industries are Boulder Dam with a rated capacity of 952,300 in May, 1944, and Grand Coulee Dam with 818,000 kw-capacity. The Bureau investigates water resources in the western United States and constructs and operates irrigation projects. The operating projects are important producers of war foods, forage, and fiber. Crops valued at approximately \$375,000,000 were produced in 1943 on projects watered by Reclamation systems and the 1944 record will exceed that amount. Construction work on new irrigation systems was practically all halted in October, 1942, by order of the War Production Board, but since that time restrictions have been lifted to permit construction on 25 projects under the War Food Program.

To exploit the limited resources of the West, 31 power plants have been built on 19 projects. By June, 1945, these plants had an installed capacity of 2,439,300 kilowatts. During the year power plants on reclamation projects produced 13½ billion kilowatt hours of electric energy.

The scope of the Bureau's work by the end of the 1945 fiscal year included the operation, construction, and authorization for 109 irrigation and multiple-purpose projects, in 17 Western States, including 29 initial projects in the Missouri River Basin, authorized by the Flood Control Act of 1944.

Commissioner in 1945: Harry W. Bashore.

RECONSTRUCTION FINANCE CORPORATION (RFC). The Reconstruction Finance Corporation was created by "An Act to provide emergency financing facilities for financial institutions, to aid in financing agriculture, commerce, and industry, and for other purposes," approved Jan. 22, 1932. These powers have been increased by subsequent legislation. The Corporation may perform all functions it is authorized to perform under law until the close of business Jan. 22, 1947, or such earlier date as the President may authorize.

The Corporation may make loans to public agencies, financial institutions, insurance companies, railroads, drainage, levee, irrigation and similar districts, mining and fishing industries, public school districts or other public school authorities; subscribe for and make loans upon non-assessable stock of banks, trust companies, insurance companies, mortgage loan companies, national mortgage associations, and purchase capital notes or debentures of such institutions; make loans for the carrying and orderly marketing of agricultural commodities and livestock; and exportation of agricultural or other products; and purchase securities from Public Works Administration (q.v.).

War Assets Corporation, a subsidiary of Reconstruction Finance Corporation, has been designated by the Surplus Property Administrator as the disposal agency for Government-owned surpluses of aircraft, industrial plants, capital and producer goods, and consumer goods, constituting nine-tenths of all war surpluses, based on original cost. Under Executive Order 9665, dated December 27, 1945, the lending and surplus property disposal activities of Smaller War Plants Corporation were transferred, effective January 28, 1946, to Reconstruction Finance Corporation and, on the same date, War Assets Corporation will assume responsibility for these activities and will also assume all duties of certifying war veterans as eligible for preference in the purchase of surplus property, a function heretofore served by Smaller War Plants Corporation.

The principal war functions of the Corporation, now being liquidated, included the acquisition of strategic and critical materials by Rubber Reserve Company, Metals Reserve Company, and Defense Supplies Corporation, and the financing of defense plants by Defense Plant Corporation. The above-mentioned national defense subsidiaries were dissolved, and their functions, duties and authorities transferred to the Reconstruction Finance Corporation by Public Law 109, 79th Congress, approved June 30, 1945. Other war functions of the Corporation included the making available, through War Damage Corporation, of reasonable protection against loss of or damage to property, real or personal, resulting from enemy attack; and the making of loans to business engaged in the production of war material.

RFC SUMMARY OF ACTIVITIES FEB. 2, 1932, THROUGH DEC. 31, 1945

	Authorizations	Disbursements	Repayments and Other Reductions
For benefit of agriculture.....	\$ 2,603,733,430.83	\$ 1,452,180,464.11	\$ 1,451,914,990.45
To open banks to meet demands of depositors.....	1,334,880,161.08	1,138,251,619.27	1,127,742,816.38
For distribution to depositors in closed banks.....	1,422,805,381.24	1,060,157,541.49	1,055,789,788.04
For bank capital (including Export-Import Bank's \$176,800,000 and Federal Home Loan Banks \$124,741,000).....	1,647,452,669.00	1,471,806,311.56	1,094,381,587.46
For self-liquidating projects (including PWA municipal securities).....	1,299,208,298.95	1,074,695,899.18	978,007,210.16
To business enterprises.....	1,063,091,382.87	485,504,511.69	308,370,399.84
For loans to National Defense.....	22,950,253,659.64	21,409,656,163.20	20,746,007,984.30*
For loan to Great Britain and Northern Ireland.....	425,000,000.00	390,000,000.00	138,786,814.17
For purchase of stock—National Defense.....	126,000,001.00	26,000,001.00	20,000,000.00
To drainage, levee and irrigation districts.....	149,434,448.64	101,071,502.18	70,129,522.21
To railroads (including PWA railroad securities).....	1,767,281,871.59	1,052,068,714.70	846,802,937.76
For loans to and capital of mortgage loan companies (including \$25,000,000 capital of The RFC Mortgage Company and \$11,000,000 capital Federal National Mortgage Association).....	912,342,930.95	781,809,214.28	710,209,281.85
For loans to and capital of insurance companies.....	151,589,750.19	137,843,209.81	106,079,865.03
To building and loan associations (including receivers).....	179,989,559.59	140,158,067.90	140,158,067.90
To public school authorities.....	25,689,050.00	23,257,175.00	23,257,175.00
For catastrophe rehabilitation loans.....	17,815,168.36	13,499,235.25	12,035,303.06
To state funds for insurance of deposit of public monies.....	13,087,715.88	13,064,631.18	13,064,631.18
For mining, milling and smelting businesses.....	19,039,100.00	8,998,409.40	4,998,641.39
For loan to Export-Import Bank.....	25,000,000.00	25,000,000.00	25,000,000.00
For other purposes.....	669,057.07	614,813.85	614,813.85
Total—By Directors of the Corporation	\$36,134,363,636.68	\$30,805,628,485.05	\$28,872,551,830.03
Allocations and loans to other governmental agencies and for relief by direction of Congress.....	4,254,603,216.87	3,801,390,936.51	3,381,121,094.11*
Grand Total	\$40,388,966,853.55	\$34,607,019,421.56	\$32,253,672,924.14

* Includes \$7,650,698,299.91 representing credits arising from the merger of R F C war affiliates with R F C. under Public Law 109—79th Congress. As of December 31, 1945 the Corporation held \$8,866,774,700.49 in commodities, wartime capital facilities and other assets acquired under the merger.

* Includes \$2,785,258,704.21 of Corporation's notes canceled pursuant to Act of Congress approved Feb. 24, 1938.

A summary of activities is presented in the accompanying table. See CONTRACT SETTLEMENT.

CHARLES B. HENDERSON.

RED CROSS, American National. The ending of World War II found the Red Cross at the peak of its activities for the armed forces, and well started in its services to the veterans of World War II. During the war 80 percent of the employees of the American Red Cross were engaged in services to the armed forces. On July 1, 1945, there were 9,400 workers overseas and 9,300 in the United States. Three months later, 9,177 were overseas and 10,194 were on the home front meeting needs arising from demobilization. Of the 138 headquarters buildings constructed in the United States during the war, only 24 had been closed by the end of November. Red Cross services, which had reached into every part of the world where servicemen were on duty, were continued for the armies of occupation. On July 1, there were 820 clubs and rest homes and 500 clubmobiles and other mobile units overseas, and on November 1, 648 clubs and 223 mobile units. Of the 107 in the Pacific, 8 were in Japan. During the war Red Cross camp, hospital, and liaison workers aided 12,000,000 servicemen or their families, overseas and in the United States, and 8,223,000 were assisted by Red Cross Home Service workers; 6,298,000 communications were handled by Red Cross Home Service workers for servicemen, ex-servicemen, and civilians; communities sent 25,000,000 articles to Army and Navy installations through the Camp & Hospital Council, whose program now includes similar service in veterans' hospitals. During the war, the American Red Cross certified 104,400 nurses to the military.

The American Red Cross prepared 27,000,000 packages for prisoners of war and handled 110,000 communications for them. Aid to prisoners of war was made possible through the International Red Cross Committee in Geneva, acting under provisions established by the Geneva Convention of 1929.

Foreign war relief sent abroad from the beginning of the war to July 1, 1945, totalled more than \$148,000,000. The relief supplies were made up of Red Cross supplies and those bought with funds allocated by Congress and resources from other agencies and governments. Red Cross volunteer workers produced more than 31,000,000 garments for foreign war relief in the war period.

The Red Cross Blood Donor Service, inaugurated in February, 1941, at the request of the Army and Navy, completed its mission September, 1945, during which time it had procured 13,326,242 pints of blood from volunteer donors. In 1945, the American Red Cross extended its blood donor recruitment activities by authorizing its chapters to assist in civilian programs under certain conditions.

During the year ending June 30, 1945, Red Cross Claims Service workers assisted 400,000 discharges applying for government benefits. Home Service workers assisted 898,000 ex-servicemen and their families during the war. That 364,448 were aided in the last fiscal year indicates the probable increase in a service that has been continuous since 1917.

In the year ending June 30, 1945, 3,000,000 workers in the Volunteer Special Services gave 175,000,000 hours of work. Their record of work for the war period exceeded 429,000 years of 40-hour weeks, and involved training courses represented in certificates given by the Red Cross: Home Service Corps, 14,438; Nurse's Aides, 194,994; Motor Corps, 42,695; Hospital and Recreation Corps, 55,556; Canteen, 151,027; Dietitian's Aides (1943-45) 9,003; Staff Assistance, 89,672.

During the war the Red Cross gave a total of 1,421,163 certificates to trainees in Home Nursing; 693,557 in Nutrition Courses; First Aid, 7,507,958; Accident Prevention, 32,944; Water Safety, 1,227,293. In cooperation with military medical men, a convalescent swimming program, applicable to a wide range of physical and mental disability cases, was initiated.

In the year ending June 30, 1945, the Red Cross

gave relief in 260 disasters in the United States, giving assistance to 242,000 persons.

The Junior Red Cross, with a membership of 19,905,400 produced 35,000,000 comfort and recreational articles for the armed forces during the war; and for Foreign War Relief up to July 1, 1945, expended \$665,000 from its National Children's Fund, which was used mainly for medical and school supplies, and also sent over a million gift boxes to its contemporaries overseas.

The President of the United States is President of the American Red Cross. Basil O'Connor is Chairman of the Central Committee, composed of 18 members, 6 of whom are appointed by the President to represent the United States Government; 6 are elected by the Board of Incorporators; and 6 by the Delegates of Chapters. Basil O'Connor is Chairman of the Board of Governors of the League of Red Cross Societies, elected to that post for a four-year term at the League's first meeting since 1938, in Paris, Nov. 14-16, 1945.

REFRIGERATION AND AIR CONDITIONING. To the public the real news regarding refrigeration in 1945 was that by the end of the year domestic refrigerators began to appear on the market, although in small numbers. Several additional companies, including a tire manufacturer, announced their entrance into this field so that, when storage cabinets and freezers are included, the number of makers of this type of equipment is astonishingly large. The success of frozen foods, too, brought many new firms into this phase of refrigeration. In connection with frozen foods, headway was made during 1945 in the freezing of pre-cooked foods for the general market, originally begun in 1942. There are now 22 frozen-cooked-food packers now producing baked beans, chicken a la king, chile con carne, pumpkin pie mix, fruit pies, oyster stews and similar foods, all of which need only be warmed for serving, and several of which were first introduced late in 1945. This interest in frozen foods has taken in the refrigerated locker plants which are now adding departments for handling commercially frozen foods. Frozen food retail stores in increasing numbers opened in the larger cities.

The low temperature testing chambers for planes built during the war, called attention to the need for accurate data on the thermal conductivity of insulating materials at very low temperatures. Research at the University of Minnesota showed that the conductivity for all materials tested becomes lower as the temperature of the material falls.

Contamination of food by odors is a matter of concern to many industries, particularly apple storage firms. Studies at Cornell University showed that certain types of odorous volatiles, such as that from pine wood boxes, are related to temperature and humidity, and that activated carbon was effective in combating the odor in apple storage warehouses.

Remarkably, many of the developments of the year concern mobile equipment in one form or another. Georgia Power Co. purchased, for use in Atlanta, the first air conditioned trolley coach. Built by Pullman-Standard, the car will be operated experimentally. The air conditioning equipment, designed by Carrier, weighs 1,500 pounds, and handles 2,200 cu. ft. of air per minute. The first intracity bus, for San Antonio, was shipped in November by A.C.F.-Brill in Philadelphia. This bus, essentially the same as an inter-city recently completed, carries 36 passengers, has a 4-ton (ice-making capacity) conditioner with automatic controls, and is heavily insulated. The war had not yet

ended when the U. S. Maritime Commission had laid plans for the conversion of certain vessels. This included the air conditioning of various quarters on vessels intended for tropical routes.

According to information released in December giving details of the new 64-passenger transport plane *Constellation*, built by Lockheed, this ship and its prototypes will have complete air conditioning. Although it appears paradoxical that cooling should be necessary in the freezing air at high altitudes, the sum of various heat gain components totals to a significant figure. In such planes the pressurizing precludes bringing in too much outside cool air, the heat emitted by lights and passengers is fairly high. Added to these factors, the energy absorbed by the plane in moving through the air at high velocities is conducted in the form of heat into the plane. This heat is absorbed by an air-cycle refrigeration system far more compact than that on a railroad car.

Army engineers, studying Germany's refrigeration industry after that country's collapse, reported two significant accomplishments of the Nazis during the war years. The first was that, as a result of their early experiences in North Africa, a thorough study of tank air conditioning by the Germans finally resulted in their concluding that a hood over each occupant's head, through which a coolant is circulated to keep the veins in the temples cooled, is all that is necessary. Unfortunately for them, the Nazis did not fully develop this theory until Africa was lost. The second accomplishment was their adaptation of the heat pump principle (a refrigeration system arranged so that it can be used for cooling or heating) to thirty large submarines which could voyage from Germany to Japan and back without taking on fresh water. The compactness of the heat pump was a desirable feature of these vessels.

The first to be so treated, the U.S.S. *Brooklyn* has been laid up with her interior protected against corrosion by batteries of dehumidifiers which will automatically remove moisture from the air as fast as it leaks in. The same treatment is planned for literally hundreds of Navy ships and it is expected to be more practicable than the practice of covering machinery with grease. A study of the subject is still under way at the Pennsylvania State College. An additional advance in the art of air drying was the introduction of a dehumidifier employing triethylene glycol as the drying agent. Moisture is absorbed from air passing through a glycol spray, the glycol next being reactivated by heat, then re-sprayed. A small portion of the glycol is carried over into the air stream, but this is considered desirable in the light of the findings by Robertson and others at the University of Chicago on the ability of glycol to destroy air-borne bacteria, particularly those which attack the respiratory organs. Simultaneously, the same manufacturer announced a cooling tower employing no spray nozzles.

CLIFFORD STROCK.

REFUGEES. The year 1945 brought an end to the movement of refugees and displaced persons in Europe, dictated and directed by Germany to meet her desperate needs of manpower for defense. As the Allied and Soviet armies drew together to press home the attacks from the west and the east, the German populations in Poland and East Prussia and the minority Germans in the Balkan States were driven westward in desperate flight. They were to experience at the end of the war the privations and sufferings which had been the lot of the victims of Nazi oppression in the earlier years of

the war. Forced marches on foot in cold weather without food or shelter for days proved for the eastern Germans a prelude to the complete defeat and rout of the German armies. This westward movement extended as far as Denmark in the north, and Austria and Switzerland in the southwest.

Simultaneously those Germans who had fled from the bombed cities of Germany to western Europe during the war were evacuated to Germany in advance of the retreating German forces in the west. It was estimated that the displacement of Germans at the end of war in Germany and Austria exceeded 20,000,000 persons.

Moving in opposite directions out of Germany were the millions of United Nations slave laborers, prisoners of war, and inmates of Nazi concentration camps for whom liberation by the Allied armies provided an opportunity to trek homeward, exhausted, but deliriously happy upon their release. Many thousands found in the concentration camps were too ill to be moved. The ravages of malnutrition and overwork in the camps had taken their toll and for them liberation came too late.

As order was restored in Germany, the occupying military forces organized and assisted the homeward movement of United Nations nationals. Railroads and railroad equipment in Europe had generally been destroyed. Organized movement was by truck and by plane and many thousands proceeded by foot, lacking other means of transportation. By the end of September over 5,500,000 United Nations displaced persons had been repatriated to their home countries from western Germany to find their homes destroyed or farms ruined by the destruction of war.

Included in this total were approximately 2,000,000 Soviet nationals, comparable numbers of French, some 500,000 Belgians, a smaller number of Netherlands nationals and over 600,000 Italians. The repatriation of Poles was delayed by the reorganization of the Polish Government and by the mass movement of Soviet nationals eastward. Some 800,000 Polish nationals remained in Germany at the end of the year awaiting the opening of transportation in the spring.

Other groups remained in Germany at the year's end to bring the total of the non-repatriated to 1,250,000 in the British, French, and United States zones of occupation. These included Latvians, Estonians, and Lithuanians who resisted repatriation because of the political changes which had taken place in their countries, and Yugoslavs unwilling to return to Yugoslavia for the same reason. There were approximately 100,000 Jewish survivors of Nazi concentration camps, over half of Polish origin. German, Polish, and Hungarian Jews expressed preference for immigration to Palestine and indicated determination not to return to their home areas in which they had suffered so terribly at the hands of the Nazis. In December a new movement of Jews from Poland to Germany increased the numbers in this group.

President Harry S. Truman's appeal to the British Government in August 1945 for the admission of 100,000 Jews in Germany to Palestine led to the appointment in December of the Anglo-American Committee of Inquiry which was charged with the duty of making recommendations to the two governments on the possibilities of settlement for Jews in Palestine or in other countries outside Europe. The Committee planned to hold hearings in Washington, London, Germany, and Palestine.

During the course of the year the United Nations Relief and Rehabilitation Administration extended

its services for displaced persons by taking over from the military forces in Germany responsibility for the operation of centers for displaced persons. In 1944 UNRRA had assumed responsibility for displaced persons camps in the Middle East centered at Cairo. From these camps some 27,000 Yugoslavs were repatriated in the early part of the year, while other thousands remained awaiting available transportation. Greek refugees and former residents of the Dodecanese Islands were also repatriated from Cairo. Over 25,000 Polish refugees remained in camps in East Africa, India, Iran, and Mexico until shipping could be released for their return.

President Truman recommended that the 1,000 refugees brought to the United States from Italy in 1944, who were housed in a temporary camp at Oswego, New York, be admitted to the United States under the provisions of the immigration laws. Many thousands of military internees and war refugees in Sweden and Switzerland returned to their countries. However, some 30,000 refugees from the Baltic countries refused repatriation in Sweden, and approximately 15,000 Jewish refugees remained in Switzerland.

Pressures from Poland, Czechoslovakia, Hungary and Austria to evacuate minority Germans who had assisted the enemy during the war resulted in a substantial movement of Volksdeutsche into the reduced area of Germany during the fall of the year. The numbers involved were estimated to be between 6,000,000 and 8,000,000. Although it was not expected that the movement would be completed before the spring of 1946, serious conditions of overcrowding and lack of shelter in Germany were reported. The movement strained the available food stocks in Germany and posed extensive relief problems for the occupying military forces.

The Intergovernmental Committee on Refugees extended relief during the year to stateless refugees, chiefly German and Austrian victims of Nazi persecution in Spain, Portugal, France, Belgium, The Netherlands, and Switzerland, countries in which UNRRA did not administer relief. UNRRA's authority to assist displaced persons in Germany was limited at the Third Meeting of the Council of UNRRA in London in August to a period of six months. The Intergovernmental Committee was preparing at the end of the year to take over the long-term task of finding homes for displaced persons whose repatriation proved to be impossible. The problem of refugees was placed on the agenda of the Assembly of the United Nations which was to meet in January 1946 in London. There appeared little prospect, however, that the United Nations Organization would find it possible to assume such a heavy responsibility so early in its existence.

Announcement was made that the Paris Conference on Reparation had agreed in December that refugees from Nazi Germany and Austria and nationals of countries formerly occupied by Germany, who were victims of Nazi concentration camps, would benefit from a reparations fund of \$30,000,000 to be administered by the Governments of the United States of America, France, The United Kingdom, Czechoslovakia and Yugoslavia in consultation with the Intergovernmental Committee on Refugees. The fund was to be used not for the compensation of individual victims, but for their rehabilitation or resettlement.

The displacement of civilians in the Far East was not less than that in Europe. The estimate of those uprooted by the war in China was approximately 20,000,000. The movement was generally

westward from the coastal areas, although many displaced in the areas of military activity returned to their homes as soon as the military action had ceased. In December the China Overseas Commission, responsible for the return of Chinese to prewar domiciles in overseas countries, reported 184,000 Chinese registered for repatriation. 120,000 of these were located in the coastal region south of Shanghai. Some 31,000 Chinese had already returned to China from Japan.

In addition to the Japanese displaced within their country by the bombing of cities and the dispersal of industries during the war, many Japanese returning to Japan from Manchuria, China, Formosa and the Japanese Mandated Islands were homeless at the end of the war. The total of displaced persons of all nationalities in Japan at the

year's end was estimated to be 12,000,000. The largest group of non-Japanese consisted of 2,000,000 Korean laborers and their families. Their repatriation to Korea began immediately after the end of the war. Included also were unknown numbers of Chinese laborers and some 38,000 Formosan Chinese laborers.

The numbers of Japanese abroad in China, Manchuria, Korea, New Guinea and South East Asia were estimated to be in the neighborhood of 6,500,000. Approximately 2,000,000 were in China, 1,500,000 in Manchuria, 800,000 in Korea and 500,000 in South East Asia. The infiltration of Japanese into countries of the Far East had taken place gradually over a period of years before the war and was intensified during the war. Their repatriation to Japan after the war became a matter

U S RELIGIOUS BODIES HAVING 50,000 MEMBERS AND OVER

(Yearbook of American Churches)

Name of Religious Body	Year	No of Churches Reported	Inclusive Church Membership	Membership 15 Years of age and over
Seventh Day Adventists	1944	2,531	194,832	194,832
Assemblies of God	1944	5,055	227,349	227,349
Baptist Bodies:				
Northern Baptist Convention	1944	7,348	1,555,914	1,478,111, Est.
Southern Baptist Convention	1944	25,965	5,667,926	5,384,530
National Baptist Convention, U. S. A. Inc.	1944	24,460	4,021,618	3,700,078, Est.
National Baptist Convention of America	1944	7,286	2,352,339	2,117,091, Est.
American Baptist Association	1936	1,064	115,022	93,955
Free Will Baptists	1940	1,102	118,871	117,130, Est.
National Baptist Evangelical Life and Soul Saving Assembly of U. S. A.	1944	451	59,743	48,137
Primitive Baptists	1886	1,726	69,157	68,881
United American Free Will Baptist Church	1944	350	75,000	66,000
Church of the Brethren	1944	1,019	180,287	176,100
Buddhist Churches of America	1944	46	70,000	52,000
Church of Christ, Scientist	1936	2,113	268,915	268,915
Churches of God.				
Church of God	1944	1,817	67,137	67,137
Church of God (Anderson, Ind.)	1942	1,412	83,875	71,293, Est.
Church of God in Christ	1944	2,000	300,000	250,000
Church of the Nazarene	1944	2,965	187,082	187,082
Churches of Christ	1936	3,815	309,551	309,551, Est.
Congregational Christian Churches	1943	5,753	1,075,401	1,075,401
Disciples of Christ	1944	7,917	1,672,354	1,504,115, Est.
Eastern Orthodox Churches				
Greek Orthodox Church (Hellenic)	1944	280	250,000, Est.	200,000, Est.
Russian Orthodox Church	1942	300	300,000	200,000, Est.
Evangelical and Reformed Church	1943	2,835	675,958	675,958
Evangelical Church	1944	1,994	255,881	249,241
Federated Churches	1936	508	88,411	88,093
Religious Society of Friends (Five Years Meeting)	1944	453	70,000	58,850, Est.
Independent Fundamental Churches of America	1944	600	60,000	60,000, Est.
Jewish Congregations	1936	3,728	4,641,184	3,341,652, Est.
Latter Day Saints				
Church of Jesus Christ of Latter Day Saints	1944	1,757	870,346	728,665
Reorganized Church of Jesus Christ of Latter Day Saints	1944	563	113,064	102,071
Lutherans				
American Lutheran Conference.				
American Lutheran Church	1944	1,834	584,499	413,280
Evangelical Lutheran Augustana Synod of N. A.	1943	1,123	373,163	279,530
Norwegian Lutheran Church of America	1943	2,522	595,034	422,383
Lutheran Synodical Conference of N. A.				
Evangelical Lutheran Synod of Missouri, Ohio & Other States	1944	4,073	1,356,655	948,371
Evangelical Lutheran Joint Synod of Wisconsin & Other States	1943	914	324,492	191,008
The United Lutheran Church in America	1943	3,762	1,690,204	1,213,985
Mennonite Church	1944	500	51,813	50,000
Methodist Bodies				
African Methodist Episcopal Church	1942	7,265	868,735	667,035
African Methodist Episcopal Zion Church	1940	2,252	489,244	382,316
Colored Methodist Episcopal Church	1944	4,400	382,000	321,000
The Methodist Church	1944	41,067	8,046,129	7,400,000, Est.
Polish National Catholic Church	1944	146	250,600	200,000
Presbyterian Bodies:				
Cumberland Presbyterian Church	1944	1,048	64,984	44,786, Est.
Presbyterian Church in the U. S.	1944	3,500	565,853	519,157, Est.
Presbyterian Church in the U. S. A.	1944	8,462	2,040,399	1,960,399
United Presbyterian Church of North America	1944	847	193,637	174,273, Est.
The Protestant Episcopal Church	1944	7,894	2,227,524	1,501,777
Reformed Bodies:				
Christian Reformed Church	1944	310	128,914	71,831
Reformed Church in America	1944	736	169,390	169,390
The Roman Catholic Church	1944	14,791	23,419,701	17,330,558, Est.
The Salvation Army	1944	1,474	208,329	91,664
International General Assembly of Spiritualists	1945	236	100,000	100,000
Unitarian Churches	1944	364	62,593	62,593
United Brethren in Christ	1944	2,748	433,480	390,132
Totals: No. of Bodies, 55		231,481	70,623,989	58,067,201

of urgency because of the shortage of food stocks in the areas in which they were found. At the end of the year it was reported that approximately 300,000 Japanese civilians had been repatriated to Japan. The movement was delayed primarily by the lack of available shipping.

GEORGE L. WARREN.

RELIGIOUS ORGANIZATIONS. Church membership in the United States numbered 72,492,669 persons, the largest total in the nation's history, according to the 1945 *Yearbook of American Churches*, published under the auspices of the Federal Council of the Churches of Christ in America. This total comprises 52.5 percent of the July 1, 1944 population of 138,100,874 persons (Bureau of Census estimate). Of the total, 97.4 percent are reported in the 55 religious bodies having 50,000 or more members (see table), with the remaining 2.6 percent of the membership found in 201 other bodies.

The table shows that the majority of the total religious membership is absorbed by three religious groups: Protestant bodies over 50,000—41,943,104 members, Roman Catholic Church—23,419,701 members, and Jewish Congregations—4,641,184 members. (See table on page 503.)

Contributions in gifts and bequests to religion in 1942, the latest survey, reached \$720,800,000, as estimated by the Department of Commerce.

For further information on the larger denominations, see separate articles furnished by an official of each; FEDERAL COUNCIL OF THE CHURCHES OF CHRIST AND JEWISH WELFARE BOARD.

REPRESENTATIVES, U.S. The following list by States of the members of the House of Representatives, 79th Congress, convening in 1946, was taken from the official list compiled by South Trumble, Clerk of the House. The numbers preceding the names indicate Congressional districts, those appearing without numbers being Representatives at Large. Other facts indicated in the type are as follows:

Democrats in roman (242); Republicans in *italic* (190); Progressives in SMALL CAPS (1); American Labor in CAPITALS (1); vacancies (6), 5th Georgia; at large, New Mexico, 19th, New York; 10th, North Carolina; 33rd, Pennsylvania, 6th, Virginia; total 435. Those marked ° served in the Seventy-eighth Congress, those marked † served in a previous Congress, and those marked ‡ are Members elected from newly created or changed districts. In States which were redistricted those marked || were not candidates for renomination and are shown in the district in which they would have been renominated. Those marked § indicate that 2 districts were consolidated requiring 2 incumbent Members to be candidates for the same district in the primary or general election. Predecessors of incoming Members in brackets [].

Alabama

1. Frank W. Boykin * Mobile
2. George M. Grant * Troy
3. George W. Andrews * Union Springs
4. Sam Hobbs * Selma
5. Albert Rains [Starnes] Gadsden
6. Pete Jarman * Livingston
7. Carter Manasco * Jasper
8. John J. Sparkman * Huntsville
9. Luther Patrick † [Newsome] Birmingham

Arizona

- Richard F. Harless * Phoenix
John R. Murdock * Tempe

Arkansas

1. E. C. Gathings * West Memphis
2. Wilbur D. Mills * Kensett
3. James W. Trimble [Fulbright] Berryville
4. Fadio Cravens * Fort Smith

Arkansas—Continued

5. Brooks Hays * Little Rock
6. W. F. Norrell * Monticello
7. Oren Harris * El Dorado

California

1. Clarence F. Lea * Santa Rosa
2. Clair Engle * Red Bluff
3. J. Leroy Johnson * Stockton
4. Frank R. Havenner † [Kolp] San Francisco
5. Richard J. Welch * San Francisco
6. George P. Miller [Carter] Alameda
7. John H. Tolan * Oakland
8. Jack Z. Anderson * San Juan Bautista
9. Bertrand W. Gearhart * Fresno
10. Alfred J. Elliott * Tulare
11. George E. Outland * Santa Barbara
12. Jerry Voorhis * San Dimas
13. Ned R. Healy [Poulsen] Los Angeles
14. Helen Gahagan Douglas [Ford] Los Angeles
15. Gordon L. McDonough [Costello] Los Angeles
16. Ellis E. Patterson [Rogers] Los Angeles
17. Cecil R. King * Los Angeles
18. Clyde Doyle [Johnson] Long Beach
19. Chet Holifield * Montebello
20. Carl Hisehaw * Pasadena
21. Harry R. Sheppard * Yucaipa
22. John Phillips * Banning
23. Ed. V. Izac * San Diego

Colorado

1. Dean M. Gulespie * Denver
2. William S. Hull * Fort Collins
3. J. Edgar Chenoweth * Trinidad
4. Robert F. Rockwell * Paonia

Connecticut

1. Herman P. Kopplemann † [Miller] Hartford
2. Chase Going Woodhouse [McWilliams] New London
3. James P. Geelan [Compton] New Haven
4. Clare Boothe Luce * Greenwich
5. Joseph E. Talbot * Naugatuck
- Joseph F. Ryter [Monkiewicz] Hartford

Delaware

- Philip A. Traynor † [Wulley] Wilmington

Florida

1. J. Hardin Peterson * Lakeland
2. Emory H. Price * [Green] (at large) Jacksonville
3. Robert L. Sikes * [Sikes] Crestview
4. Pat Cannon * Miami
5. Joe Hendricks * De Land
6. Dwight L. Rogers † Fort Lauderdale

Georgia

1. Hugh Peterson * Auley
2. E. E. Cox * Camilla
3. Stephen Face * Americus
4. A. Sidney Camp * Newnan
5. _____ [Ramspeck] Milledgeville
6. Carl Vinson * Dalton
7. Malcolm C. Tarver * Douglas
8. John S. Gibson * Canton
9. John S. Wood † [Whelchel] Elberton
10. Paul Brown * Elberton

Idaho

1. Compton I. White * Clark Fork
2. Henry C. Dworshak * Burley

Illinois

1. William L. Dawson * Chicago
2. William A. Rowan * Chicago
3. Edward A. Kelly † [Bunbey] Chicago
4. Martin Gorski * Chicago
5. Adolph J. Sabath * Chicago
6. Thomas J. O'Brien * Chicago
7. William W. Link [Schuetz] Chicago
8. Thomas S. Gordon * Chicago
9. Alexander J. Rea [Dewey] Chicago
10. Ralph E. Church * Evanston
11. Cavanaugh W. Reed * West Chicago
12. Noah M. Mason * Oglesby
13. Leo E. Allen * Galena
14. Anton J. Johnson * Macomb
15. Robert B. Chipperfield * Canton
16. Everett M. Dirksen * Pekin
17. Leslie O. Arends * Melvin
18. Jessie Sumner * Milford
19. Rolla O. McMillen * Decatur
20. Sid Simpson * Carrollton
21. Evan Howell * Springfield
22. Melvin Price [Johnson] East St. Louis
23. Charles W. Vursell * Salem
24. Roy Clippinger * [James V. Heidinger] Carmi
25. C. W. (Runt) Bishop * Cartrville
- Emily Taft Douglas [Day] Chicago

Indiana

1. Ray J. Madden * Gary
2. Charles A. Halleck * Rensselaer

Indiana—Continued

3. Robert A. Grant * South Bend
4. George W. Gillie * Fort Wayne
5. Forest A. Harness * Kokomo
6. Noble J. Johnson * Terre Haute
7. Gerald W. Landis * Linton
8. Charles M. LaFollette * Evansville
9. Earl Wilson * Huron
10. Raymond S. Springer * Connersville
11. Louis Ludlow * Indianapolis

Iowa

1. Thomas E. Martin * Iowa City
2. Henry O. Talle * Decorah
3. John W. Gwynne * Waterloo
4. Karl M. LeCompte * Corydon
5. Paul Cunningham * Des Moines
6. James I. Dolliver [Gulchrist] * Fort Dodge
7. Ben F. Jensen * Exira
8. Charles B. Hoeven * Alton

Kansas

1. Albert M. Cole [Lambertson] * Holton
2. Errett P. Scrivner * Kansas City
3. Thomas D. Winter * Girard
4. Edward H. Rees * Emporia
5. Clifford R. Hope * Garden City
6. Frank Carlson * Concordia

Kentucky

1. Noble J. Gregory * Mayfield
2. Earle C. Clements [Vincent] * Morganfield
3. Emmet O'Neal * Louisville
4. Frank L. Chelf [Carrier] * Lebanon
5. Brent Spence * Fort Thomas
6. Virgil Chapman * Paris
7. Andrew J. May * Prestonsburg
8. Joe B. Bates * Greenup
9. John M. Robison * Barbourville

Louisiana

1. F. Edward Hébert * New Orleans
2. Paul H. Maloney * New Orleans
3. James Domengeaux * Lafayette
4. Overton Brooks * Shreveport
5. Charles E. McKenzie * Monroe
6. James H. Morrison * Hammond
7. Henry D. Larcade, Jr. * Opelousas
8. A. Leonard Allen * Winnfield

Maine

1. Robert Hale * Portland
2. Margaret Chase Smith * Skowhegan
3. Frank Fellows * Bangor

Maryland

1. Dudley G. Roe [Ward] * Sudlersville
2. H. Streett Baldwin * Hydes
3. Thomas D'Alessandro, Jr. * Baltimore
4. George H. Fallon [Ellison] * Baltimore
5. Lansdale G. Sasser * Upper Marlboro
6. J. Glenn Beall * Frostburg

Massachusetts

1. John W. Hesellon [Treadway] * Deerfield
2. Charles R. Olson * Springfield
3. Philip J. Philbin * Clinton
4. Pehr G. Holmes * Worcester
5. Edith Nourse Rogers * Lowell
6. George J. Bates * Salem
7. Thomas J. Lane * Lawrence
8. Angier L. Goodwin * Melrose
9. Charles L. Gifford * Cotuit
10. Christian A. Herter * Boston
11. James M. Curley * Boston
12. John W. McCormack * Dorchester
13. Richard B. Wigglesworth * Milton
14. Joseph W. Martin, Jr. * North Attleboro

Michigan

1. George G. Sadowski * Detroit
2. Earl C. Michener * Adrian
3. Paul W. Shafer * Battle Creek
4. Clara E. Hoffman * Allegan
5. Bartel J. Jonkman * Grand Rapids
6. William W. Blackney * Flint
7. Jesse P. Wolcott * Port Huron
8. Fred L. Crawford * Saginaw
9. Albert J. Engel * Muskegon
10. Roy O. Woodruff * Bay City
11. Fred Bradley * Rogers City
12. Frank E. Hook † [Bennett] * Ironwood
13. George D. O'Brien * Detroit
14. Louis C. Rabaut * Grosse Pointe Park
15. John D. Dingell * Detroit
16. John Lesinski * Dearborn
17. George A. Dondero * Royal Oak

Minnesota

1. August H. Andresen * Red Wing
2. Joseph P. O'Hara * Glencoe

Minnesota—Continued

3. William J. Gallagher [Gale] * Minneapolis
4. Frank T. Starkey [Maas] * St. Paul
5. Walter H. Judd * Minneapolis
6. Harold Knutson * Manhattan Beach
7. H. Carl Andersen * Tyler
8. William A. Puttenger * Duluth
9. Harold C. Hagen * Crookston

Mississippi

1. John E. Rankin * Tupelo
2. Jamie L. Whitten * Charleston
3. William M. Whittington * Greenwood
4. Thomas G. Abernethy * Okolona
5. Arthur Winstead * Philadelphia
6. William M. Colmer * Pascagoula
7. Dan R. McGehee * Meadville

Missouri

1. Wat Arnold * Kirksville
2. Max Schwabe * Columbia
3. William C. Cole * St. Joseph
4. C. Jasper Bell * Blue Springs
5. Roger C. Slaughter * Kansas City
6. Marion T. Bennett * Springfield
7. Dewey Short * Galena
8. A. S. J. Carnahan [Elmer] * Ellinore
9. Clarence Cannon * Elsberry
10. Orville Zimmerman * Kennett
11. John B. Sullivan † [Miller] * St. Louis
12. Walter C. Plosser * Clayton
13. John J. Cochran * St. Louis

Montana

1. Mike Mansfield * Missoula
2. Wesley A. d'Ewart † [O'Connor] * Wilsall

Nebraska

1. Carl T. Curtis * Minden
2. Howard H. Buffett * Omaha
3. Karl Stefan * Norfolk
4. A. L. Miller * Kimball

Nevada

- Berkeley L. Bunker † [Sullivan] * Las Vegas

New Hampshire

1. Chester E. Merrow * Center Ossipee
2. Sherman Adams [Stearns] * Lincoln

New Jersey

1. Charles A. Wolbertson * Merchantville
2. T. Millet Hand [Wene] * Cape May City
3. James C. Auchincloss * Rumson
4. Frank A. Mathews, Jr. * [Powers] * Riverton
5. Charles A. Eaton * Watchung
6. Clifford P. Case [McLean] * Rahway
7. J. Parnell Thomas * Allendale
8. Gordon Canfield * Paterson
9. Harry L. Towse * Rutherford
10. Fred A. Hartley, Jr. * Kearny
11. Frank L. Sundstrom * East Orange
12. Robert W. Kean * Livingston
13. Mary T. Norton * Jersey City
14. Edward J. Hart * Jersey City

New Mexico

- Antonio M. Fernandez * Santa Fe

New York

1. Edgar A. Sharp † * Patchogue
2. Leonard W. Hall * Oyster Bay
3. Henry J. Latham † * Queens Village
4. William B. Barry * St. Albans
5. James A. Roe † [Merritt II] (at large) * Flushing
6. James J. Delaney † * Long Island City
7. John J. Delaney * Brooklyn
8. Joseph L. Pfeifer * Brooklyn
9. Eugene J. Keogh * Brooklyn
10. Andrew L. Somers * Brooklyn
11. James J. Heffernan * Brooklyn
12. John J. Rooney * Brooklyn
13. Donald L. O'Toole * Brooklyn
14. Leo F. Rayfiel † * Brooklyn
15. Emanuel Celler * Brooklyn
16. Ellsworth B. Buck * [Burchill II] * Staten Island
17. Joseph Clark Baldwin * New York City
18. VITO MARCANTONIO * ‡ [Kennedy II] * New York City
19. ——— * [Dickstein] * New York City
20. Sol Bloom * New York City
21. James H. Torrens * New York City
22. Adam C. Powell, Jr. † * New York City
23. Walter A. Lynch * New York City
24. Benjamin J. Rabin † * New York City
25. Charles A. Buckley * New York City
26. Peter A. Quinn [Fitzpatrick II] * New York City
27. Ralph W. Gwinn † * Bronxville
28. Ralph A. Gamble * Larchmont

New York—Continued

29. Augustus W. Bennet [Fish]	(Newburgh)
30. Jay LeFevre *	New Paltz
31. Bernard W. (Pat) Kearney *	Gloversville
32. William T. Byrne *	Loudonville
33. Dean P. Taylor *	Troy
34. Clarence E. Kiburn *	Malone
35. Edwin C. Fuller * [Douglas §]	Parish
36. Clarence E. Hancock *	Syracuse
37. Edwin Arthur Hall *	Binghamton
38. John Taber *	Auburn
39. W. Sterling Cole *	Bath
40. George F. Rogers [O'Brien]	Rochester
41. James W. Wadsworth *	Genesee
42. Walter G. Andrews * [Stanley || (at large)]	Buffalo
43. Edward J. Elaeasser [Mrak]	Buffalo
44. John C. Butler *	Buffalo
45. Daniel A. Reed *	Dunkirk

North Carolina

1. Herbert C. Bonner *	Washington
2. John H. Kerr *	Warrenton
3. Graham A. Barden *	New Bern
4. Harold D. Cooley *	Nashville
5. John H. Folger *	Mount Airy
6. Carl T. Durham *	Chapel Hill
7. J. Bayard Clark *	Fayetteville
8. W. O. Burgin *	Lexington
9. Robert L. Doughton *	Laurel Springs
10. ——— * [Ervin]	
11. Alfred L. Bulwinkle *	Gastonia
12. Zebulon Weaver *	Asheville

North Dakota

William Lemke *	Fargo
Charles R. Robertson † [Burdick]	Bismarck

Ohio

1. Charles H. Elston *	Cincinnati
2. William E. Hess *	Cincinnati
3. Edward J. Gardner [Jeffrey]	Hamilton
4. Robert F. Jones *	Lima
5. Cliff Clevenger *	Bryan
6. Edward O. McCowen *	Wheelersburg
7. Clarence J. Brown *	Blanchester
8. Frederick C. Smith *	Marion
9. Homer A. Kamey *	Toledo
10. Thomas A. Jenkins *	Ironton
11. Walter E. Brehm *	Logan
12. John M. Vorys *	Columbus
13. Alvin F. Weichel *	Sandusky
14. Walter B. Huber [Rowe]	Akron
15. P. W. Griffiths *	Marietta
16. William R. Thom † [Carson]	Canton
17. J. Harry McGregor *	West Lafayette
18. Earl R. Lewis *	St. Clairsville
19. Michael J. Kirwan *	Youngstown
20. Michael A. Feighan *	Cleveland
21. Robert Cresser *	Cleveland
22. Frances P. Bolton *	Lyndhurst
George H. Bender *	Cleveland Heights

Oklahoma

1. George B. Schwabe [Disney]	Tulsa
2. William G. Stigler *	Stigler
3. Paul Stewart *	Antlers
4. Lyle H. Boren *	Seminole
5. A. S. Mike Monroney *	Oklahoma City
6. Jed Johnson *	Anadarko
7. Victor Wickersham *	Mangum
8. Ross Risley *	Guymon

Oregon

1. Walter A. Norblad † [Mott]	Astoria
2. Lowell Stockman *	Pendleton
3. Homer D. Angell *	Portland
4. Harris Ellsworth *	Roseburg

Pennsylvania

1. William A. Barrett [Gallagher]	Philadelphia
2. William T. Granahan †	Philadelphia
3. Michael J. Bradley * § [Pratt §]	Philadelphia
4. John Edward Sheridan *	Philadelphia
5. William J. Green, Jr. [Pracht]	Philadelphia
6. Herbert J. McGlinchey [Myers §, Scott, Jr. §]	Philadelphia
7. James Wolfenden *	Upper Darby
8. Charles L. Gerlach *	Allentown
9. J. Roland Kiser *	Lancaster
10. John W. Murphy *	Dunmore
11. Daniel J. Flood [Miller]	Wilkes-Barre
12. Ivor D. Fenton * [Troutman || (at large)]	Mahoney City
13. Daniel K. Hoch *	Reading
14. Wilson D. Gillette *	Towanda
15. Robert F. Rich † ‡	Woolrich
16. Samuel K. McConnell, Jr. *	Penn Wynne
17. Richard M. Simpson *	Huntingdon
18. John C. Kunkel *	Harrisburg
19. Leon H. Gavin *	Oil City

Pennsylvania—Continued

20. Francis E. Walter *	Easton
21. Chester H. Gross *	Manchester (R.F.D.)
22. D. Emmert Brumbaugh *	Claysburg
23. J. Buell Snyder *	Perryopolis
24. Thomas E. Morgan [Furlong]	Fredericktown
25. Louis E. Graham *	Beaver
26. Harve Tabbott *	Ebensburg
27. Augustine B. Kelley *	Greensburg
28. Robert L. Rodgers *	Erie
29. Howard E. Campbell †	Pittsburgh
30. Robert J. Corbett † [Scanlon]	Bellevue
31. James G. Fulton [Wright]	Dormont (Pittsburgh)
32. Herman P. Eberharter *	Pittsburgh
33. ——— † [Weiss]	

Rhode Island

1. Aime J. Forand *	Cumberland
2. John E. Fogarty * * [Fogarty]	Harmony

South Carolina

1. L. Mendel Rivers *	North Charleston
2. John J. Riley [Fulmer]	Sumter
3. Butler B. Hare *	Saluda
4. Joseph R. Bryson *	Greenville
5. James P. Richbards *	Lancaster
6. John L. McMillan †	Florence

South Dakota

1. Karl F. Mundt *	Madison
2. Francis Case *	Ouster

Tennessee

1. B. Carroll Reece *	Johnson City
2. John Jennings, Jr. *	Knoxville
3. Estes Kefauver *	Chattanooga
4. Albert Gore * † [Gore]	Carthage
5. Harold H. Earhman [McCord]	Murfreesboro
6. J. Percy Priest *	Nashville
7. Wirt Courtney *	Franklin
8. Tom Murray *	Jackson
9. Jere Cooper *	Dyersburg
10. Clifford Davis *	Memphis

Texas

1. Wright Patman *	Texarkana
2. J. M. Combs [Dies]	Beaumont
3. Lindley Beckworth *	Gladewater (R.F.D.)
4. Sam Rayburn *	Bonham
5. Hutton W. Sumners *	Dallas
6. Luther A. Johnson *	Corsicana
7. Tom Pickett [Patton]	Palestine
8. Albert Thomas *	Houston
9. Joseph J. Mansfield *	Columbus
10. Lyndon B. Johnson *	Johnson City
11. W. R. Poage *	Waco
12. Fritz G. Lanham *	Port Worth
13. Ed Gossett *	Wichita Falls
14. John E. Lyle [Kleberg]	Copus Christi
15. Milton H. West *	Brownsville
16. R. Ewing Thomason *	El Paso
17. Sam M. Russell *	Stephenville
18. Eugene Worley *	Shamrock
19. George H. Mahon *	Colorado City
20. Paul J. Kilday *	San Antonio
21. O. C. Fisher *	San Angelo

Utah

1. Walter K. Ganger †	Cedar City
2. J. W. Robinson *	Provo

Vermont

Charles A. Plumley *	Northfield
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Virginia

1. Schuyler Otis Bland *	Newport News
2. Ralph H. Daughton *	Norfolk
3. J. Vaughan Gary * [Satterfield]	Richmond
4. Patrick H. Drewry *	Petersburg
5. Thomas G. Burch *	Martinsville
6. ——— * [Woodrum]	
7. A. Willis Robertson *	Lexington
8. Howard W. Smith *	Alexandria
9. John W. Flannagan, Jr. *	Bristol

Washington

1. Hugh De Lacy [Magnuson]	Seattle
2. Henry M. Jackson *	Everett
3. Charles R. Savage [Norman]	Shelton
4. Hal Holmes *	Ellensburg
5. Walt Horan *	Wenatchee
6. John M. Coffee *	Tacoma

West Virginia

1. Matthew M. Neely † [Schuyler]	Fairmont
2. Jennings Randolph *	Elkins
3. Cleveland M. Bailey [Rohrbough]	Clarksburg
4. Hubert S. Ellis *	Huntington
5. John Kee *	Bluefield
6. E. H. Hedrick [Smith]	Beckley

Wisconsin

1. Lawrence H. Smith *	Racine
2. Robert K. Henry [SAUTHOFF]	Jefferson
3. William H. Stevenson *	La Crosse
4. Thad F. Wasielewski *	Milwaukee
5. Andrew J. Biemiller [McMurray]	Milwaukee
6. Frank B. Keefe *	Oshkosh
7. Reid F. Murray *	Ogdensburg
8. John W. Byrnes [Dilweg]	Green Bay
9. MERLIN HULL *	Black River Falls
10. Alvin E. O'Konksi *	Mercer

Wyoming

Frank A. Barrett *	Lusk
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Alaska Delegate

E. L. Bartlett [Dimond]	Juneau
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Hawaii Delegate

Joseph R. Farrington *	Honolulu
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Resident Commissioner of the Philippines

Carlos P. Romulo *	Manila
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Resident Commissioner of Puerto Rico

Jesús T. Piñero P [Bolívar Pagán]	San Juan
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* Resigned from 78th Cong., effective Oct. 19, 1944.

^b Vacancy caused by the resignation of Robert Rainspeck, Dec. 31, 1945.

^c Elected Nov. 6, 1945, to fill vacancy caused by the death of James V. Hedinger, Mar. 22, 1945.

^d Elected June 5, to fill vacancy caused by the death of James J. O'Connor, Jan. 15, 1945.

^e Elected Nov. 6, 1945, to fill vacancy caused by the resignation of D. Lane Powers, August 30, 1945.

^f Vacancy caused by the resignation of Clinton P. Anderson, June 30, 1945.

^g Vacancy caused by the resignation of Samuel Dickstein, Dec. 30, 1945.

^h Vacancy caused by the death of Joe W. Ervin, Dec. 25, 1945.

ⁱ Elected Jan. 11, 1946, to fill vacancy caused by the death of James W. Mott, Nov. 12, 1945.

^j Vacancy caused by the resignation of Samuel A. Weiss, Jan. 7, 1946.

^k Resigned from the 78th Cong., effective Dec. 7, 1944.

^l Resigned from the 78th Cong., effective Dec. 4, 1944.

^m Elected Mar. 6, 1945, to fill vacancy caused by the resignation of Dave E. Satterfield, Jr., Feb. 15, 1945.

ⁿ Vacancy caused by the resignation of Clifton A. Woodrum, Dec. 31, 1945.

^o No political affiliation, appointed Aug. 10, 1944, to succeed Joaquim M. Elizalde, who resigned Aug. 9, 1944, to serve indefinitely.

^p Popular Democrat, elected Nov. 7, 1944, for 4 years.

REUNION. A French colony, 420 miles east of Madagascar. Area, 970 square miles; population (1941), 220,955. Chief towns: St. Denis (capital), 32,637 inhabitants (1941); St. Paul, 23,055; St. Louis, 20,867; St. Pierre, 20,150. Pointe-des-Galets is the main port. Education (1941): 245 schools and 22,900 pupils. The chief products are sugar, rum, manioc, coffee, vanilla, and spices. Trade (1943): imports 181,674,000 francs; exports 18,923,000 francs (franc was worth about \$0.02 in 1943). Governor: Jean Capagorry.

REYNOLDS FOUNDATION, Inc. A foundation established in 1936 for charitable and civic purposes within the State of North Carolina by the brother and sisters of Zachary Smith Reynolds, deceased. The income from the beginning of the foundation has been used primarily for a campaign to control venereal disease in the State. Annual grants have been made to the North Carolina State Health Department for this purpose. The contribution for 1945, as in 1944, was \$200,000. The book value of the principal of the Trust, as of June 30, 1945, was \$10,023,937.54, which was a little less than its approximate market value. The Trustees are W. N. Reynolds, President, Richard J. Reynolds, Mary Reynolds Babcock, Nancy Reynolds Bagley, W. R. Hubner, Secretary, Stratton Coyner, Winston-Salem, N. C.

ROADS AND STREETS. Highways completed in the United States in the year ending with June, 1945,

totaled only 4,011 miles of all classes, as compared with 5,695 in 1944, 8,445 in 1943, 10,178 in 1942, and 12,936 in 1941. The total includes 3,302 miles of access roads to camps and war industries, 462 miles of the strategic net, and 247 for miscellaneous war purposes. Of road-rail grade crossings, 21 were eliminated and 54 protected by signals or other devices. The total cost of all this work was \$111,062,750, of which 80 per cent (\$89,423,842) was paid by the Federal government. Approval of new projects also fell to a new low level of 2,730 miles.

With war begun, the long-term plans of the Public Roads Administration were shelved, and new construction and normal replacement of worn surfaces were stopped. Increased road traffic for war purposes indicated the need for a postwar program which would meet traffic requirements and also provide employment and stimulate business activity. The Federal-Aid Act of December 20, 1944, authorized \$500,000,000 for each of the first three postwar years to aid the States in their highway work, each State to match the amount assigned to it. Of this sum, \$225 million was for the federal-aid system, \$150 million for secondary or feeder roads, and \$125 million for sections of the federal-aid roads within urban areas.

The above Act also required the designation of two national highway systems: (1) a coordinated system of interstate roads, not exceeding 40,000 miles, to be planned by the P.R.A. and State highway departments; (2) a system of secondary roads, planned by cooperation of the P.R.A., with State and county officials. In February, the P.R.A. requested the several State highway departments to recommend routes for the nation-wide interstate roads. These routes are now being studied in order to provide a system of modern roads connecting cities and industrial districts. They will pass through large cities by expressways, and will be supplemented by radial and belt roads round these cities.

Standards of construction have been adopted but the secondary roads will have different types of low-cost durable surfaces. Traffic on these secondary roads is classed as follows; (A) less than 100 vehicles per day, (B) 100 to 400, (C) 400 to 1,000 vehicles. Since volume of traffic is important in relation to routes and paving, traffic surveys have been made in urban areas of 30,000 to 2-million population. Traffic on rural roads has been studied by means of automatic recorders at 675 locations and by toll-bridge records. In view of controversies over permissible weights of trucks and trailers, California has introduced a scale or "loadometer" which is placed in the road and records the weight upon each wheel of a vehicle passing over it. A special problem is the admitted liability of the Federal government for the cost of repairing roads built for light traffic but badly damaged by heavy military traffic. Reconstruction of war-damaged roads in the Philippine Islands is another activity of the P.R.A.

Practically every State has plans for road construction and improvement, both to meet traffic requirements and to provide a reservoir of employment. Most of these plans include expressways for high-speed traffic between cities. Tolls are favored in some cases for financing individual projects, but are not permitted on Federal-aid work, and are generally considered undesirable. It has been proposed (but negated) to finance, in this way, a 500-mile expressway from New York to Buffalo and Pennsylvania. Tendencies of State legislatures to appropriate for various purposes the

HIGHWAYS, MOTOR VEHICLES, MOTOR FUEL CONSUMPTION, AND TAXES, BY STATES *(As issued in 1945 by the Public Roads Administration)*

State	State-Controlled Highways (1944)		Number of Motor Vehicle Registrations (1944)				1944 Motor-Fuel Consumption (gal.)	Motor-Fuel Tax Receipts (1944)	
	Total Mileage	Surfaced Mileage	Total (including taxicabs)	Busses*	Trucks and Trailers*	Tractors*		Total	Rate per Gallon* (cents)
Ala.....	6,957	6,852	356,375	283,244	3,472	69,659	253,058,000	\$15,126,000	6
Aris.....	3,820	3,184	137,231	109,523	497	27,211	133,072,000	5,047,000	6
Ark.....	9,754	9,273	265,554	190,166	989	74,459	179,310,000	10,564,000	6.5
Calif.....	13,705	13,375	2,780,051	2,441,974	5,806	332,479	3,980,941,000	51,069,000	3
Colo.....	12,257	10,420	330,505	262,743	824	66,988	297,076,000	7,764,000	4
Conn.....	2,887	2,887	494,654	429,799	2,155	63,000	274,358,000	6,889,000	3
Del.....	3,839	3,023	67,992	55,595	437	11,960	50,006,000	1,809,000	7
Fla.....	8,389	8,015	491,399	402,668	2,106	86,625	383,549,000	21,661,000	4
Ga.....	13,998	8,641	521,317	423,746	3,269	94,302	379,986,000	20,232,000	6
Idaho.....	5,180	4,357	147,563	111,797	233	35,533	98,076,000	4,661,000	5.1
Ill.....	11,836	11,817	1,724,336	1,515,387	2,900	206,049	1,190,127,000	35,170,000	3
Ind.....	10,309	10,504	942,854	803,433	6,878	132,543	682,038,000	23,723,000	4
Iowa.....	9,695	9,659	696,447	596,610	1,181	98,656	524,812,000	15,205,000	3
Kans.....	9,882	9,494	593,035	475,481	607	116,947	442,847,000	7,811,000	3
Ky.....	10,096	10,070	433,242	355,360	2,390	75,492	295,469,000	12,363,000	5
La.....	18,485	15,758	401,015	324,906	3,127	72,982	305,648,000	17,540,000	7
Maine.....	9,296	9,117	193,942	148,050	895	44,997	130,801,000	4,474,000	4
Md.....	4,405	4,405	452,922	394,314	1,464	57,144	295,377,000	10,626,000	4
Mass.....	1,918	1,918	825,508	718,639	4,983	101,886	537,797,000	13,935,000	3
Mich.....	9,423	9,211	1,476,907	1,335,857	1,683	139,367	1,083,842,000	26,383,000	3
Minn.....	11,236	11,223	755,859	639,594	1,867	114,398	473,944,000	18,093,000	4
Miss.....	6,283	6,283	257,745	188,043	2,451	67,251	206,290,000	11,364,000	6
Mo.....	16,129	16,112	831,405	685,804	3,398	142,203	517,229,000	10,043,000	2
Mont.....	7,963	6,866	157,347	110,617	780	45,950	114,588,000	5,441,000	5
Neb.....	9,236	8,891	397,936	326,700	639	70,597	223,907,000	10,552,000	5
Nev.....	5,485	3,378	46,781	37,106	155	9,520	63,735,000	1,325,000	4
N.H.....	3,619	3,615	119,479	88,583	592	30,304	65,781,000	2,337,000	4
N.J.....	2,095	1,972	989,700	848,815	6,003	134,882	1,044,580,000	18,859,000	3
N.M.....	9,445	6,912	111,464	82,190	1,448	27,826	110,902,000	4,492,000	5
N.Y.....	14,145	12,774	2,246,885	1,955,977	8,817	282,091	1,403,425,000	47,853,000	4
N.C.....	60,730	35,732	597,228	500,645	2,570	94,013	416,406,000	22,302,000	6
N.D.....	7,104	6,592	180,531	133,434	151	46,946	169,104,000	2,558,000	4
Ohio.....	18,444	18,411	1,879,824	1,692,676	3,144	184,004	1,375,041,000	44,744,000	4
Okla.....	9,660	8,883	495,494	391,233	1,878	102,383	478,799,000	15,851,000	5
Ore.....	7,081	6,818	410,633	331,641	1,219	77,773	280,511,000	11,767,000	5
Penn.....	40,730	34,507	1,906,694	1,638,495	7,088	261,111	1,132,203,000	42,432,000	4
R.I.....	879	863	172,174	151,481	684	20,009	120,996,000	2,812,000	3
S.C.....	11,996	7,976	336,917	283,020	1,959	51,938	219,328,000	11,918,000	6
S.D.....	5,965	5,474	178,597	142,755	227	35,615	143,268,000	5,404,000	4
Tenn.....	7,612	7,577	453,030	375,966	2,252	74,812	334,909,000	21,688,000	7
Texas.....	24,370	22,996	1,553,574	1,264,805	1,806	286,963	4,078,701,000	51,562,000	4
Utah.....	5,438	4,178	153,373	126,950	567	25,856	106,537,000	3,808,000	4
Vt.....	1,802	1,802	84,434	74,058	139	10,237	44,981,000	1,786,000	4
Va.....	46,987	35,570	530,212	443,461	2,742	84,009	433,323,000	18,188,000	5
Wash.....	6,347	6,013	603,281	505,153	1,960	96,168	382,212,000	16,397,000	5
W.Va.....	33,129	15,481	274,919	218,118	1,058	55,743	171,248,000	8,550,000	5
Wis.....	10,009	10,009	822,380	679,987	2,758	139,635	510,392,000	18,806,000	4
Wyo.....	4,124	4,013	81,147	61,265	405	19,477	74,625,000	2,202,000	4
D.C.....	.....	.....	123,997	108,477	2,115	13,405	110,038,000	2,891,000	3
U.S.....	564,174	472,701	30,086,189	25,466,331	106,518	4,513,340	26,305,253,000	748,057,000	4.06*

* Excluding publicly owned vehicles. † Commercial full trailers included with trucks. * Taxicabs included with trucks. † Includes estimated 1,025 privately owned school busses. * Trailers included with trucks. † Trucks under 1,500 pounds capacity included with automobiles. * Weighted average rate

funds derived from vehicle licenses has led to passage of laws prohibiting such diversion. In June, 1945, the governor of Wisconsin vetoed such a law, but it was passed over his veto; in November, a similar law was passed in Kentucky. New Jersey passed a law for a system of expressways for automobiles exclusively.

Many large cities have plans for limited-access roads or expressways to carry fast traffic without interference by local traffic. These roads may be elevated or depressed or on the surface, and connected with the street system only at long intervals. At Detroit, two such projects are financed jointly by the State, county and city. These are the John C. Lodge expressway, running north, and the Cross-town line from the western city limits across the city. The former will be depressed for its 12-mile length. Similar projects at Chicago include an 8-mile line from the lake to the western suburbs. As planned, this is to have (outside of the business district) a depressed line having two four-lane roadways separated by a four-track, rapid-transit railroad.

A toll road from Toledo to Charleston is one of the long-distance projects. The Key West "over-seas" road in Florida may be purchased by the State and made free of tolls. A 95-mile road is

proposed between Dallas and Fort Worth, Texas, and will be depressed to pass through each city. New York has a 5-year program which includes links in its expressways and elevated highways.

In street work, there have been few developments, but maintenance has been stressed to the limit in many cases to keep old surfacing in usable condition. Reconstruction and repaving are immediate needs, and research as to paving materials and methods has continued in spite of difficulties. Wider use is to be made of snow melters and snow loaders to clear streets in winter and thus facilitate traffic. Collapse of a sidewalk at Toledo, Ohio, causing death of a pedestrian, resulted in all sub-sidewalk space being put under city control. Such accidents have occurred in other cities. To relieve traffic congestion, Chicago has considered one-way streets, but a great need in many cities is stricter enforcement of parking regulations on busy streets.

Highway construction in South America is in its infancy, but promises rapid expansion. Many engineers from those countries have been in the United States, either as college students or as visitors. On the 3,300-mile Inter-American Highway, from the United States border to Panama, built with assistance of the United States, there are now 2,487 miles surfaced for all-year automo-

bile traffic and 280 miles for good weather. Trails that are largely impassable total 567 miles.

On the Pan-American Highway, from Panama to Buenos Aires, only limited progress has been made. Its route lies south along the west coast to Valparaiso, Chile, and then over the Andes and directly across Argentina. An alternative route, east of the Andes, runs east from Arequipa, Peru, to LaPaz, Bolivia, and then southeast to Buenos Aires. A branch is to run from Murillo, Colombia, to the Atlantic port of LaGuaira, Venezuela. Engineers from the United States are building government roads in Ecuador, from Quito 100 miles to the Peruvian border; and in Bolivia from Cochabamba (elev. 8,500) 250 miles to Santa Cruz (elev. 1,200), crossing the Andes at 10,000 feet elevation. In Brazil, a 35-mile express road between Sao Paulo and the Atlantic port of Santos, to be completed in 1946, has two 23-ft. lanes, with 8-ft. shoulders and a 10-ft. dividing strip.

In Canada, the U. S. Army is maintaining the Alaska Highway, but Canada will take it over in April, 1946. The agreement provides that the Canadian section will become a part of the Canadian highway system, but open to free use by the United States. Canadian projects include a 330-mile road from the Alberta Northern Railway to the Great Slave Lake and a 150-mile road from the Peace River district to Prince George. Ontario is completing its 250-mile scenic highway along the north side of Lake Superior. In Great Britain, the new government faces the problem of working a system of old and inadequate roads into a system suitable for modern transport. This is complicated by the shifting of population and dispersal of industries under war conditions. The National Road Transport Association was organized in 1945 as a merger of a number of local associations.

In France and Italy a commission of the Allies has carried on extensive reconstruction of war-damaged roads. Turkey has a tentative program for 18,000 miles of roads in ten years, and has sent a group of engineers to study American roads. India has an astonishingly limited road mileage, but seems to have no idea of bringing it up to date. A 300-mile military road was built by the Japanese to connect the highways of Siam and Burma, and thus form a land route for handling supplies, in place of the long sea route around the Malay Peninsula. The U. S. military Ledo Road, in Burma, from the rail head at Ledo to Bhamo on the Burma Road, 400 miles, was opened in January, 1945. It appears that road work will be a marked activity in nearly all countries during the next decade. See BRIDGES.

E. E. RUSSELL TRATMAN.

ROCKEFELLER FOUNDATION, The. Chartered in 1913 for the permanent purpose of "promoting the well-being of mankind throughout the world." The present program of the Foundation is concerned with the extension and application of knowledge in certain definite fields of the medical, natural, and social sciences, the humanities, and public health.

Medical Sciences. In the medical sciences the Foundation's interest centers mainly on research and teaching in the field of nervous and mental diseases and on the improvement of medical services. Its appropriations in 1945 for work along these lines include \$282,000 to the Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine, for studies of genetic factors of emotional variation and intelligence in mammals; \$115,000 to the Uni-

versity of Illinois for research on the biochemical aspects of schizophrenia; \$112,000 to the Harvard Medical School for the development of teaching and research in psychiatry; \$24,000 to Columbia University for the investigation of genetic factors in the incidence of nervous and mental diseases peculiar to old age; \$45,000 to Karolinska Institute, Stockholm, for research in neurophysiology; \$32,000 to the American Psychiatric Association, New York City, for work of its Committee on Psychiatric Nursing; \$250,000 to the Bingham Associates Fund of Maine and the Bingham Associates Fund of Massachusetts for the development of a program of postgraduate medical education in certain rural areas and towns of Massachusetts; \$45,600 to Group Health Cooperative, Inc., New York City, for expenses in operating and developing medical insurance programs; and \$29,000 toward the expenses of Medical Administration Service, Inc., New York City, a voluntary association of laymen and physicians providing information to industries and to government and private agencies which plan or maintain medical care.

Natural Sciences. The program in the natural sciences is concerned mainly with experimental biology. Among the appropriations in this field were \$350,000 to Harvard University for research in the Department of Physical Chemistry of the Medical School on the physical chemistry of the proteins and related substances; \$150,000 to the University of Iceland toward the cost of building and equipping an institute of experimental pathology; \$54,900 to Harvard University for basic studies in chemotherapy; \$75,000 to Karolinska Institute, Stockholm, toward the cost of equipping the Department of Biochemistry and the Department of Cell Research in the Medical Nobel Institute; \$20,000 to the University of Illinois for research in the biochemistry of the amino acids; \$19,000 to the California Institute of Technology for research in immunology; \$15,175 to the University of Leeds for studies on analysis of biological tissues by physical techniques; \$18,000 to the University of Wisconsin for research in the physical chemistry of the proteins of human blood; \$125,000 to the Research Institute for Physics, Academy of Sciences, Stockholm, toward the cost of constructing a cyclotron; \$50,000 to the Massachusetts Institute of Technology for the design and construction of a new high-voltage electrostatic generator for nuclear research.

Social Sciences. In the social sciences, studies of international relations and postwar problems are receiving major emphasis. In general, aid is given to projects contributing to the understanding of important social problems and to the development of personnel and methods. Some of the 1945 appropriations were \$152,000 to the Royal Institute of International Affairs, London, toward the cost of producing a history of the War and the peace settlement, and an additional \$144,000 to this Institute for its research program; \$150,000 to the University of Chicago for the support of research in the Division of the Social Sciences; \$100,000 to the Social Science Research Council, New York City, for fellowships and for reconversion and retraining of social science personnel; \$80,000 to the Council on Foreign Relations, New York City, for continuation of war and peace studies and for its general research program; \$51,030 to the University of Glasgow for development of research and training in the social sciences; \$40,000 to the Institute for Advanced Study, Princeton, toward the expenses of a study of the Law of International Aviation; \$30,000 to Tufts College for an experi-

mental program in the psychiatric approach to training and research in sociology; \$10,000 to the University of California for study of the effects of Japanese migration and resettlement in California; and \$250,000 to Columbia University toward the development of a Russian institute in its School of International Affairs.

Humanities. The program in the humanities is concerned with studies in language and foreign cultures aiming toward better international understanding, with regional studies in the United States and Canada, and with such means as drama, radio, motion pictures, libraries, and museums for raising cultural levels of contemporary society. Grants made included \$155,000 to the National Theatre Conference for support of activities and projects for improving educational and creative values in American universities and colleges through drama; \$90,000 to the American Library Association, Chicago, for the expenses of selecting and purchasing reference books for libraries in war areas; \$25,000 to this Association for exchanges of library personnel within North and South America; \$43,000 to the University Research Fund, São Paulo, Brazil, toward operation of its bibliographical information service; \$50,000 to Stanford University for teaching and research in the areas and languages of the Pacific, Eastern Asia, and Russia; \$25,000 to the American Council of the Institute of Pacific Relations, New York City, for productions of English translations of source materials on Chinese history; \$7,500 to Yale University and a similar sum to the Colorado School of Mines for the purchase of recording and reproducing equipment for language instruction; \$16,700 to the American Council of Learned Societies, Washington, D. C., toward the cost of completing a revised and enlarged edition of Redhouse's English and Turkish Lexicon; \$25,000 to the Rocky Mountain Radio Council, Inc., for expenses and equipment in connection with its work of preparing radio programs of educational and cultural value suited to the needs and interests of the listeners of the region; \$100,000 as a special fund in the humanities for the postwar development of personnel in the United States.

Public Health. The Foundation appropriated \$2,200,000 for the work of its International Health Division. This work includes research on a number of diseases, among them yellow fever, malaria, influenza, typhus fever, rabies, diphtheria, syphilis, tuberculosis, and hookworm infection; demonstrations in the control of certain of these diseases in their environments; cooperation with governments in the organization or improvement of important services of central or local health departments; and the development of public health education. In addition, the foundation made a grant of \$300,000 to the University of Toronto toward the cost of a building for the School of Nursing, and a grant of \$1,000,000 to Harvard University toward the maintenance of its School of Public Health.

Officers. Walter W. Stewart, Chairman of the board of trustees; Raymond B. Fosdick, president; Thomas B. Appleget, vice-president; Norma S. Thompson, secretary; Edward Robinson, treasurer; George J. Beal, comptroller; Thomas M. Debevoise, counsel; Chauncey Belknap and Vanderbilt Webb, associate counsel. The offices of the Foundation are at 49 West 49th Street, New York City 20.

ROCKETRY AND JET PROPULSION. During 1945 the position of jet propulsion in the aircraft power plant spectrum was further clarified and the veil of secrecy was lifted from a number of American jet and rocket projects. Information on the state of

German progress in this field became available and provided a yardstick against which our accomplishments might be measured. Generally speaking our five years of work has brought us to a position considerably ahead of Germany from a purely technological viewpoint. But from the standpoint of practical military utilization, German jet engines and combat airplanes designed for their installation were ready in substantial numbers long before ours and long before V-E Day. It was only our incessant aerial bombardment of Nazi industry and transportation that prevented the enemy from installing the engines in the airplanes. If either the jet powered planes or the rocket powered robot bombs had gone into action against us just a little earlier, victory for us would have been much slower and more costly.

To evaluate jet propulsion progress in 1945 it is necessary first to examine the various types of power plants in their relation to each other, to other engines, and to the aircraft in which they will be installed.

In the 42 years of human flight mankind has mastered the technique of transversing the earth's closest layer of atmosphere at velocities ranging nearly to the speed of sound. In the development of this technique the power plants of surface transportation have been adapted to aircraft use with remarkable ingenuity. The reciprocating internal combustion engine made flight possible because it was capable of producing power efficiently from a light weight power pack. It reached the peak of its development when it could produce about one horsepower for every pound of engine weight.

In spite of the light weight of modern aircraft engines, each of their cylinders turns out more power than the total output of a heavy automobile engine. But there is a limit to the output of a single cylinder. The aircraft designer cries incessantly for larger engines. The only remaining way to provide them is to add more cylinders with their pistons and connecting rods linked ingeniously to a single crankshaft. Each new row or bank of cylinders adds new mechanical complications and the preservation of reliability of operation amid increasing complexity constitutes a great tribute to reciprocating engine designers' skill.

As man pushes upward toward the stratosphere new methods must be found to pack the rarefied air of higher altitudes into the fuel mixture for the engines. Superchargers for this purpose add new complexities and increase power plant weight. The propeller, which was so efficient down where the air was thicker, must struggle to bite at the thin air of the stratosphere. And so when man is ready to begin the next phase in his emancipation from the earth's surface, his power plant will be the pure jet propulsion engine.

A jet engine is a reaction power plant. It does not depend upon air density for its thrust. Its jet does not push against the air. Its rearward force merely induces a forward reaction like a garden hose trying to move backward along the stream of water flowing within it. So the jet power plant is effective at any altitude.

But because it operates by reaction, the jet is inefficient until the forward speed of the vehicle in which it is installed reaches the rearward speed of the jet. Since the jets produced by gas turbines have a velocity approximating the speed of sound (about 700 m.p.h.) we must have aircraft capable of such speeds if we are to realize the full efficiency of pure jet propulsion. Actually the jet power plant is attractive for aircraft having speeds above about 450-500 m.p.h. At this stage of aviation develop-

ment such speeds are reserved for high performance fighter aircraft and robots or guided missiles.

Aerodynamicists throughout the world are striving to overcome the serious hurdle of compressibility which sets in as an aircraft passes through the neighborhood of the speed of sound. Compressibility destroys the smooth, lift-producing flow of air over the wings and sets up shock waves which batter the wing structure while the craft is passing through the sonic speed range. Until this problem is satisfactorily solved and planes designed for sonic speeds, the pure jet engine will not have a chance to operate at its full efficiency. Rocket propulsion, which provides jets having speeds much higher than those produced by gas turbines, is just so much farther away but it has some immediate applications.

Fortunately the nature of the gas turbine is such that the designer can control the proportion of power which goes to the jet or to the turbine shaft. Thus it is possible to develop a power plant combining both propeller drive and jet propulsion. In such a power unit the propeller can be used where it is most efficient, at speeds up to 450 m.p.h. and altitudes up to about 25,000 ft. At higher speeds and altitudes the propeller can be feathered and the jet set in operation. This arrangement saves the high fuel consumption of the pure jet at low speeds.

An alternative arrangement is one in which the jet-producing function of the gas turbine is minimized and the engine is used chiefly to operate a propeller geared to the turbine-compressor shaft. Practical compromises of these types constituted the most noticeable design trends during 1945. Also noticeable was a tendency toward the axial flow type of gas turbine as compared with the centrifugal type.

A new glossary of jet propulsion engine types was released by the Air Forces during 1945. They are: 1. Turbojet, a gas turbine plus jet; 2. Turbo-prop, a gas turbine plus propeller; 3. Turbofan, a gas turbine plus ducted fan; 4. Motorjet, a reciprocating engine plus ducted fan; 5. Ramjet, a continuous jet with compression by aerodynamic ram; 6. Pulsojet, an intermittent jet.

Gas Turbines with Centrifugal Compressors. Our early gas turbines, the General Electric I-16 and I-40, followed the designs of Squadron Leader Frank Whittle of England and were therefore centrifugal compressor types. Such engines are short and fat and have one stage of compression in which air is thrown off of the compressor blades into channels passing into the combustion chambers. There fuel is introduced and ignited, further expanding the compressed air and forcing it to drive the turbine.

Details of the I-16 (Army J-31) and I-40 (Army J-33) were released by the Army Air Forces late in 1945. Each of these models has a single stage centrifugal compressor connected to a single stage turbine wheel. Air enters the front of the engine through circumferential guide vanes and is sucked in by the impeller. It is compressed to 3.75 atmospheres and forced at high speed into diffuser channels and through adapters to the combustion chambers. The earlier and smaller I-16 has 10 of these chambers or "cans" while the I-40 has 14. Fuel, which may be kerosene, low grade gasoline or fuel oil, is introduced through nozzles into the combustion chambers. Ignition of the fuel results in additional expansion of the compressed air and this hot gas is led to the turbine wheel. Part of its energy is used to turn the turbine which in turn keeps the compressor running. The remainder is

exhausted rearward in the form of a propulsive jet.

Power output of jet engines is measured in pounds of static thrust at sea level because their horsepower varies widely with the speed of the plane in which they are installed. At 375 m.p.h. one pound of thrust equals one horsepower. At lower speeds a pound of thrust yields less than one horsepower; at higher speeds it yields more. Sea level static thrust of the I-16 is 1,670 lb.; of the I-40 is 4,000 lb. The I-16 has a maximum over-all diameter of 41.5 in., an over-all length of 70 in. The I-40 has a diameter 6.5 in. greater and is 31½ in. longer over-all. The I-16 weighs 825 lb. with accessories and about 1,054 lb. installed. The average weight of the I-40 is 1,820 lb. The greatly increased power output of the I-40 over that of the I-16 for only a small increase in dimensions results from the incorporation of the "through-flow" principle compared with the "reverse-flow" pattern of the earlier design. Eliminating the reversal of air flow through the engine greatly increases its efficiency.

First airplane to use the I-16 was the Bell XP-59-A (Aircomet) which was developed simultaneously with the engine in deep secrecy and later was produced by Bell as a jet propulsion trainer. The Lockheed P-80-A (Shooting Star) fighter was designed around the I-40 engine. Neither of these airplanes saw service before the European war ended and, although their power and performance was high, their relatively low range precluded their use in our long-distance Pacific war.

Propeller drive and jet are combined in a later G.E. design, the TG100. This power plant will be installed in several aircraft of new design. Its specifications have not yet been released.

During 1945 an airplane combining a reciprocating engine and turbojet was unveiled by the Navy. The Ryan Fireball (FR-1) has a conventional R-1820 Wright Cyclone engine in the nose with the usual controllable pitch propeller installation. A G.E. I-16 turbojet is installed in the tail and can be operated after the plane has reached a speed where jet propulsion is efficient. Gasoline is used for both engines to avoid fuel system complications.

British strategic air policy emphasizes short range, high performance interceptor fighters for the defense of the Islands. One of their latest designs, the Gloster Meteor IV, captured the world's speed record of 606 m.p.h. during 1945. Its engine is the Rolls-Royce Derwent V, fifth in a line of Whittle-type jet engines developed by Rolls-Royce. The Derwent is a centrifugal compressor type of gas turbine somewhat similar to the two early G.E. designs. Its sea level static thrust is believed to be about the same as that of the I-40. Other British manufacturers are developing planes and engines in this class. Another recent design is the deHavilland Goblin turbojet engine installed in the Vampire Fighter.

Axial Flow Gas Turbines. Axial flow gas turbines are long, thin engines in which incoming air passes straight through several adjacent stages of compression before it reaches the combustion chambers and ultimately the turbine blades. Their multi-stage compressors greatly increase the over-all efficiency of the power unit. Axial flow types were favored by the Germans in their long period of gas turbine development. The Junkers Jumo 004 and the BMW 003 are typical examples. In this country, the first completely American design, the Westinghouse 19-B ("Yankee") belongs to this category.

On the day after Pearl Harbor the Navy requested the Westinghouse Company to develop such an engine and engineers of the Gas Turbine Division completed the design work on several models in record time. It was not until late in 1945 however that some of the details of the Westinghouse 19-B were released. The Yankee is the first all-American designed gas turbine and its brilliant design reflects great credit upon the newly formed Aviation Gas Turbine Division of Westinghouse. Although its length and diameter are approximately one-half of that of enemy axial flow types studied since the war ended, the B-19 develops about 70 percent of their power. Its designers have made important progress in improving the rate of speed of air passing through the engine, the efficiency of combustion, and the length of life of the combustion chambers which had to be replaced very frequently in earlier engines. It is probably the most powerful engine of its size in the world at the present time.

Sea level static thrust of the 19-B is 1365 lb. for a dry engine weight of 826 lb. with accessories. Twenty-one pounds (3 gal.) of lubricating oil are required for operation. Diameter varies from 19 in. to a maximum of 20½ in.; total length is 104½ in.

Like most axial flow types the B-19 has a multi-stage compressor (6 stages), using alloy steel blades and a cast aluminum casing. Combustion chamber details are still secret but the design is known to embody a perforated conical burner ring capable of providing complete combustion at the exceptionally high speed of air flow upon which the engine design is based. A single forging is machined down to produce the turbine disk, shaft, and coupling flanges. Vitalium vanes are used in the turbine nozzle assembly.

General Electric soon will announce a new power plant of the axial flow type. Although still on the secret list the TG180 is known to have a multistage compressor. A number of new airplanes are being designed around it.

One of the latest German axial flow types, discovered in large quantities after V-E Day, is the Junkers Jumo 004, which has a considerably higher power output than the B-19 but is a very much larger engine. Its sea level static thrust is 1,970-1,980 lb., while its maximum diameter is 34 in. or nearly twice that of the B-19. It is 152 in. long. The Jumo 004 has an eight-stage compressor and has been developed with characteristic German ingenuity. Much of the ingenuity however has been devoted to the application of inferior materials, and reflects the shortages in high temperature alloys, which hampered the Nazis during the closing period of the war. An elaborate cooling system replaces the high temperature metals that were unavailable but the cooling system detracts from the thrust power output of the engine. In spite of these disadvantages, the Jumo 004 installed in the Messerschmitt 262 Fighter would have given us considerable trouble if it had gone into action.

Some German jet propulsion planes did go into action toward the end of the war. Chief among these was the Arado twin jet fighter bomber whose engines developed a thrust of 1,600-1,750 lb. Power plant was the BMW 003, of which 750 units were produced up to the end of the war. The 003 has a seven stage axial flow compressor, single stage turbine, and annular combustion chamber. Static thrust at sea level ranged from 1,760 to 2,240 lb. in various versions of the design.

In a desperate last minute effort to develop a combat plane with exceptionally high rate of climb

the Germans mounted a rocket on the 003, designating the new model 003R. The rocket unit delivered 2,750 lb. of thrust for 2 min. and German reports say the resulting performance in climb was sensational. BMW also developed other designs including a very large engine with 12 stage axial flow compressor and 3 stage turbine. It was expected to develop 7,500 lb. sea level static thrust.

Rockets and Rocket Propulsion. Although we have forged ahead of the Germans in gas turbine design, V-E Day found them about a year ahead of us in rocket development. Basic difference between rocket and turbojet is that the former derives the oxygen for combustion from the fuel within it while the turbojet uses the surrounding air for its oxygen supply. Because of the supersonic speeds of jets produced by rockets their use for continuous propulsion must await the advent of aircraft capable of such high speeds or suffer from inefficiency. The advent of the rocket projectile, however has had profound effects on military ordnance development because of its comparatively low weight and absence of recoil. During 1945 the use of rocket power for assisted take-off was further developed for military aircraft and its possibilities for commercial application were considered.

During the closing stages of the European War a high speed rocket powered fighter (Me-163) was used by the Germans. This plane was a flying wing type using liquid fuel stored within its fuselage and wings. It possessed exceptionally high performance as compared with conventional aircraft and was the only rocket powered combat craft to appear during the war.

Power plant of the Me-163 was the Walter 109-509 rocket engine which weighs only 220 lb. dry and develops a maximum thrust of 3,800 lb. This high ratio of power to weight is one of the attractive advantages of rocket engines. Their chief advantage is their high fuel consumption and resulting short duration of flight. Duration of the Walter powered Me-163 was only 12 minutes although it could be extended by shutting the power off at intervals and by using the lowest of three power outputs when the engine was turned on. By this method the flight duration could be stretched to approximately 40 min. Fuel was the usual combination of hydrogen peroxide and methanol.

Several rocket engine projects were under development in the United States during 1945. The Army Air Forces disclosed two models during the year. The XCALT-6000 and the X40ALD-3000 types, produced by Aerojet Engineering Corp., develop 6,000 and 3,000 lb. thrust respectively. Their fuel is aniline and red fuming nitric acid.

Rocket power for controlled missiles demonstrated its practicability in the German V-2 robot bomb which gave us considerable trouble toward the close of the war. Although its accuracy was low, it was a comparatively inexpensive vehicle of destruction and its use under non-flyable weather conditions gave its possessors a considerable advantage. Its thrust was 48,000 lb. for a duration of 71 sec. providing a horizontal range of 200 mi.

The V-2 touched off an extensive program of controlled missile development in 1945. Much of this work is still secret. In addition to our own duplication and improvement on the German designs, a number of other designs were under development during the year.

Rockets for assisted take-off were used on several types of Navy planes during 1945. The Jato unit, developed by Aerojet, is used to boost the power available from the conventional engine during take-off or to provide bursts of speed in flight.

This device enables an airplane to take off with an appreciable overload of fuel or bombs or to take off with normal load from an incredibly small space. Although the high acceleration and the hot jet emitted by rockets are undesirable for commercial operations, the possible use of some sort of assisted take-off to increase pay load of a commercial plane is attractive from the standpoint of air transport economics.

LESLIE E. NEVILLE.

ROSENWALD FUND, The Julius. During the 28 years since its establishment in 1917 by Julius Rosenwald, the Fund has expended approximately \$19,500,000, being all of its income from year to year and about seven-eighths of its principal fund. The Trustees are required to expend all funds within 25 years of the death of the founder, that is, before Jan. 6, 1957. At the close of the fiscal year June 30, 1945, the assets of the Fund had a value of approximately \$2,000,000. The chief program of the Fund during its early years was aid in the building of rural public schools for Negroes. The main programs in 1945 were: (1) Improving the content and quality of rural education in both white and Negro schools in the south; (2) fellowships for Negroes and for white southerners and fellowships in race relations; and (3) efforts to improve race relations, especially the relations between white and colored citizens throughout the United States. During the year 1944-45 the Fund expended \$592,000 upon these and related programs.

ROWING. The big American regattas canceled during the war were not revived last year, but all signs indicated an early revival of rowing in this country. Collegiate action was confined to the East, where Navy, Cornell, Columbia, M.I.T., and Harvard competed, while Princeton boated informal eights late in the summer.

Navy divided two dual regattas with Columbia, defeated Harvard and took top honors in the Spring Day racing at Cornell, winning from the Ithacans, Columbia and M.I.T.

Interest in rowing began to perk up again in England, where Cambridge led Oxford by two lengths in a race that recaptured some of the color of their traditional classics of prewar days. England also revived its Royal Henley on an informal basis.

Youthful Jack Kelly, Jr., son of the famous Olympic sculler, proved the individual star of the season, sweeping three tests in the Canadian Henley, five events in the People's Regatta at Philadelphia, the singles title in the Central States interscholastic championships at Detroit and the Philadelphia schoolboy title.

THOMAS V. HANEY.

RUBBER. As one of the vital factors in the dynamics of war, rubber production and the successful manufacture of synthetic rubber contributed a major share in the defeat of the Axis. As an indication of United States production capacity in synthetic rubber, a record of 668,834 long tons of GR-S, more frequently known as Buna S, met war needs in 1944, while production in Germany never rose above 120,000 tons in any comparable period.

The problem of existing crude rubber supply, and conversion to synthetic rubbers for heavy tire production, grew more dangerous as the war drew to a close. During the summer of 1944 new supply and consumption of crude rubber were approximately in balance. It was anticipated that the situation would remain fairly static except for minor drains from the stock-pile in 1945. However, the

production program was greatly accelerated to meet the schedules of vehicle and aircraft production, causing such a reduction in the stock-pile that crude rubber became the most critical of strategic materials, according to the Rubber Bureau of the War Production Board.

Military needs in 1945 required 144,000 tons of crude rubber. Since imports were so far below consumption this necessitated a 35,000 ton withdrawal from the Government's stock-pile. Requirements were further increased so that the Jan. 1, 1945, stock-pile of 96,000 tons fell considerably below 60,000 tons later in the year, a dangerous minimum for the nation. This figure offers a startling contrast to the stock-pile of 533,000 tons on hand at the time of Pearl Harbor.

Synthetic Production. During 1945 insufficient GR-I (Butyl) to meet over-all tube requirements made it necessary to fill the deficit with GR-S. In turn, however, the increased GR-S requirements in the last half of 1945 were substantially beyond the capacities of the copolymer and raw material plants. The problem was eased by the Government planning additions to the plants amounting to about 3 per cent, or \$22,000,000, of their total investment of \$725,000,000 in synthetic rubber factories. The rated capacity of the Government GR-S plants was 705,000 long tons per year, but the plants have demonstrated a capacity of 860,000 tons.

Component Materials. The increase in 1945 tire production created shortages in essential component materials. Carbon black was critically short for several months. The rayon tire cord supply was found insufficient and, in some tire sizes, was substituted for by cotton tire cord, where enough coarse cotton thread was available. The critical status of bead wire was alleviated by minor expansions in the industry and careful scheduling of production.

As it required 12 to 18 months to build new rayon cord facilities, the manufacturers were forced to use cotton cord at the rate of 1.3 pounds for each pound of rayon cord. This substitution called for the consumption of about one pound of crude rubber for every pound of rayon cord shortage. The problem was further aggravated by the need of cotton cord for tentage and other military supplies.

Advances During 1945. Despite the neglect given synthetic rubber while crude rubber was plentiful, the industry made tremendous strides during the course of the war. The greatest progress was made in the improvement of the various synthetic processes, and reclaim from synthetic stocks even proved valuable as an extender for raw rubber. The chief obstacles in reclaiming centered on sorting the scrap as to the different types of rubber and synthetic, for each type required a different reclaiming method.

In spite of the advances in synthetics, a certain percentage of crude rubber is needed for tire production and the manufacture of other products. To satisfy this requirement, the withdrawal of crude rubber from the available stock-pile was supplemented by shipments from Ceylon, South America and Africa and by continued effort to extract rubber from plants other than the *Hevea brasiliensis*, the original rubber tree. The Department of Agriculture has conducted experiments in guayule, *cryptostegia grandiflora*, goldenrod, dandelion and castilleja. Although much of these "home grown" rubbers have qualities approaching those of *Hevea*, they scarcely compare with its peacetime cost. The search for more and better rubber induced the British, under war conditions, to continue their research facilities

in Ceylon and formulate plans for the rehabilitation of the Malayan rubber-growing areas. In Brazil, where rubber originated, intentions to recapture some of its rubber trade have prompted a new research organization under the guidance of the United States.

Although GR-S remained the strongest factor in the synthetic program, it was found that Butyl (GR-I) was coming into ever increasing use, as outlined by Mr. Ernest Chilton of the Firestone Industrial Products Company in the Jan., 1946, issue of *Rubber Age*. Because Butyl, with its low permeability to gases, proved an ideal material for inner tubes, almost the entire wartime production was absorbed in war materiel. In postwar use, its high hysteresis and great resistance to some oils will make it an important synthetic for many types of mechanical goods.

Mr. Chilton pointed out that several investigators have reported new synthetic rubbers, but most of these inventions are still in the laboratory stage. Some of the most discussed new products are derived from silicone resins. Since they are unaffected by temperatures as high as 450°F. and as low as -70°F., they have already proved useful as gasket materials in airplane engines and bases for heat- and cold-resistant oils.

Even though tires and tubes formed the greatest bulk of rubber production during the war, Mr. Chilton said, the industry produced many remarkable and important war products, many of which became known only after the end of the war. Early in 1940, the Germans attempted to isolate the British Isles by a combination of U-boat warfare and the magnetic mine. Ships could be protected from the latter by an expensive and cumbersome de-Gaussing belt. This, however, did not destroy the mines which remained a potential danger, until the British built a buoyant cable coil in which sufficient magnetic forces could be created to safely explode the mines. Buoyancy was achieved in various ways, one of which was by making the cable center of tennis balls supported in a molded rubber form.

Many of the invasions were aided by collapsible rubber maps that occupied little space when folded, but when opened presented a vivid three-dimensional view of the topography. To supply the advancing troops distant from home source with spare rubber parts, the Navy built a complete small rubber shop on one of the Pacific Islands, capable of turning out 6,000 pounds of molded rubber goods a day. With similar intentions, the Army operated a tire repair shop in Italy that reconditioned as many as 500 tires a day.

In the wartime development of airplanes, rubber products materially aided in the perfection of tires, fuel cells and engine mountings. The more recent developments were designed for propellers and helicopter rotors to aid in cooling the engine, for increasing the propeller efficiency and for protecting the blades from wear.

One of the war's best kept secrets, claimed to have saved 10,000 lives on D-Day in Normandy, was a floating tank known as the D-D Device. Around the sides of a Sherman tank was a rubberized canvas wall reinforced by a steel framework, which was elevated to a height of some 15 feet by means of pneumatic rubber tubes and other mechanical devices. The displacement of this fabric hull made the tank buoyant. When the tank reached its objective, the tubes were deflated, the wall collapsed and the tank was ready for action.

Since the end of the war, new products for civilian use ranged from pneumatic surgical tourni-

quets to foamed rubber powderpuffs. For manufacturing aids, the rubber industry produced Buna N type rubber bondings for abrasive wheels, new heat-resistant forming pads and dies for sheet metal form presses, synthetics for oil seals on rotating shafts, a conveyor belt of neoprene, and fiber-glass and strain gages for the electrical recording of stresses in steel frames.

ROMANIA. A kingdom in southeastern Europe. King: Michael I, who ascended the throne upon the abdication of his father Carol II on Sept. 6, 1940.

Area and Population. The area of Rumania in March, 1945, was about 92,000 square miles and the population was approximately 16,000,000. This includes the restoration (March, 1945) of northern Transylvania (16,641 sq. mi.; pop. 2,573,000) from Hungary but is exclusive of Bessarabia and northern Bukovina which were recognized as parts of the U.S.S.R. and restored the Soviet-Rumanian frontier of June 28, 1940. Chief towns (with 1939 populations): Bucharest (capital) 648,162, Iasi (Jassy) 104,471, Galati 102,232, Cluj 100,272, Timisoara 89,872.

Production. About three-fourths of the population are engaged in agriculture. The kingdom normally produces an export surplus of cereals, livestock, and animal products. Production (in metric tons): wheat, 2,455,000 in 1941; barley, 548,500 in 1940; rye, 91,700 in 1940; oats, 481,800 in 1940; corn, 4,625,000 in 1941; beet sugar, 77,000 in 1940-41; rapeseed, 14,800 in 1942; linseed, 15,100 in 1941; hempseed, 29,700 in 1941; sunflower seed, 222,100 in 1942; soybeans, 21,500 in 1942. The 1939 wool clip was 25,500 metric tons. Livestock in 1942 included 1,102,596 horses (1941), 3,760,000 cattle, 2,400,000 swine, 9,780,000 sheep.

Petroleum produced in 1943 totaled 8,700,000 metric tons. In 1942 natural gas produced totaled 1,545 million cubic meters. Other important mineral products were salt, lignite, iron, and copper. Metallurgical production included cast iron, steel, and rolled iron. The important manufacturing lines were flour milling, brewing, distilling, and oil refining.

Foreign Trade. In 1940 imports were valued at 27,411 million lei (22,846 million in 1939); exports 36,780 million lei (26,809 million in 1939). The main imports during 1940 were iron and its products, machinery, other metals, vehicles, textiles, yarn, chemicals and apparatus, dyes, and drugs. Exports leading in 1940 were petroleum and products, cereals, animals and animal products, wood and its products.

Finance. Budget (year ended Mar. 31, 1944): 177,880,000,000 lei which included both ordinary and extraordinary budget accounts. The public debt on Mar. 31, 1942, amounted to 108,697,700,000 lei, of which internal debt represented 54,281,200,000 lei and external debt 54,436,500,000 lei. Notes in circulation in April, 1945, totaled 450 billion lei. Average exchange rate of the lei: \$0.005 in 1940; \$0.0049 for Jan.-June, 1941.

Events, 1945. The situation in Rumania during 1945 was generally parallel to that in Bulgaria. A Democratic Front government amenable to the U.S.S.R. administered the country, under Soviet direction, while the opposition, largely conservative and nationalist, sought the overthrow of the government and the elimination of Soviet influence. King Michael, whose popularity was so wide and genuine as to elicit considerate treatment from the Russians, provided a rallying-point for the opposition. In the Allied Control Commission the position of the Russian representative

was paramount. The position of British and American representatives was secondary. Their own and their countries' influence was generally on the side of the Opposition, which capitalized on such foreign sympathy as it could obtain. But the Rumanian situation was different from the Bulgarian in that, whereas in Bulgaria racial affinity and a long habit of affection and trust in the Slavic Big Brother seem to have genuinely reconciled the people, regardless of political ideology, to some form of Russian patronage, in Rumania the tradition was rather one of hostility and suspicion, and the nationalist as well as the party basis for opposition was stronger. Hence, though Russian domination made itself unmistakably felt, it must be remarked that the Russians made strong efforts to conciliate public opinion and to preserve the forms of democratic political life. Early in the year there were disagreements concerning Rumania's armistice obligations. Aside from other obligations Rumania was required to deliver to the Russians petroleum products, grain, shipping and rolling stock to the value of \$300,000,000. The Rumanians complained that the removal of equipment and supplies had reduced the country's capacity to produce and distribute even for domestic needs. Prime Minister Radescu publicly declared that "the country's obligations are beyond our powers of execution." The Socialist and Communist Parties resented the implied criticism of the Russians, but General Vinogradov, the Russian head of the Allied Control Commission, showed a conciliatory temper. The Rumanians were allowed to use enemy rolling stock in their country, and further modifications in the economic demands were made so that by June there was no longer any complaint. Similar friction was caused by the Russian demand that all able-bodied Germans in Rumania be transported to Russia for forced labor. It was argued that not only would such a step dislocate the economic life of the country, to which the Germans were vital, but also that it was unjust not to discriminate between "fascist" Germans, and Germans who had actually helped the anti-fascist cause. In general it may be said that the Russians were less eager than their Rumanian followers to introduce social measures that might disturb Rumanian industry.

Shortly before the first of the year Radescu of the conservative Ploughmen's Front had become Prime Minister, but during January and February he was attacked by the growing strength of the left, which was itself, however, too poorly united to enforce its will. The Left gained by the overwhelming victory of the Communists in the Trade Unions Congress elections in February, and it was reported that under Vice Premier Petre Groza it planned a coup. Prime Minister Radescu, even after violence in the Malaxa Works and Left activity in the provinces, sharpened the dissension by abolishing the cabinet posts held by Communists. The U.S.S.R. press and radio took the side of the Left; conservatives in Rumania charged that the Russians were using the Control Commission to end Rumanian independence and continued their efforts to win British and United States support against the U.S.S.R. As a result of demonstrations in Bucharest on February 27 Vice Commissar F. F. Vyshinski forced the resignation of Radescu from the premiership. On February 28 Prince Stirbey was invited to form a government, but on March 1, he informed King Michael that he was unable to do so, and Vyshinski declared for Groza. Michael preserved at least the appearance of constitutional procedure by consulting the various party leaders

before reaching his decision. The Communist leaders approved the choice of Groza, and indicated that they expected all the conservative members of the Radescu Cabinet to be replaced. The Peasant Party leader Maniu refused to sanction Groza's appointment, but Bratianu and Petrescu, the Liberal and Socialist leaders, recognized the expediency of yielding to Soviet pressure and agreed to the choice of Groza provided equitable representation would be given to Peasants, Liberals, and Socialists. It was feared that if Groza were rejected the Democratic Front would seize power by a coup. Michael authorized Groza to form a cabinet, but disapproved of the list presented by him on March 3 on the ground that it did not give the parties representation commensurate with their strength. Subsequently the King was apparently constrained to reconsider his rejection, and so Groza's original list was accepted. The Communists and their closest allies, the Patriots' Union, directly controlled ten of the 32 portfolios and exercised strong influence over the Ploughmen's Front representatives as well as over the remaining ministers, with the possible exception of the four Socialists. The Communist Minister of the Interior, Teohari Georgescu, who had been prominent in the campaign to oust Radescu, was a key figure in the Groza government, being in charge, among other things, of the preparations for the elections. Soviet propaganda organs hailed the new government as an expression of the democratic will of the people, and Marshal Malinovski was quoted by Groza as having promised generous co-operation with Russia. Specifically, Russia would restore northern Transylvania to Rumanian administration, return Rumanian prisoners of war, and help solve the problems of Rumanian agricultural and industrial production.

Groza announced his own program on March 7 as including: (1) Agrarian reform; the expropriation of large estates already carried out by the Democratic Front would be legalized. (2) Economic relief, and reduction in the cost of living. (3) Rapid purge of all branches of the government service. (4) Immediate reorganization of police and gendarmerie. (5) Punishment of war criminals and of those responsible for Rumania's alliance with Germany. Meanwhile the Russians took steps to prevent reaction on the part of Rumanian police and army units by disarming them and taking over the policing of the country almost entirely. In the period between the resignation of Radescu and the inauguration of the new government, the conservative parties encouraged rumors that the United States and Great Britain had intervened in the crisis and would prevent the Democratic Front from gaining exclusive control of the government. American diplomatic representatives in Moscow and Bucharest were in fact instructed to inform the Soviet Government that the United States favored a coalition government in Rumania and would regard a cabinet filled entirely by Democratic Front representatives as contravening the Yalta agreement.

In reply to the American statements Vyshinski declared that the Soviets also favored a coalition cabinet representing all genuinely democratic parties, and that it was essential that such a cabinet be capable of maintaining order behind the Russian lines. Vyshinski stressed that portion of the Yalta declaration which provides for the elimination of pro-fascist forces in liberated countries, apparently including under that category such opponents of the Democratic Front as Radescu, Maniu, and Bratianu. Both British and American

representatives gave King Michael informal encouragement during the negotiations preceding Groza's appointment, and when the left wing press demanded the arrest of Radescu he appealed for and received asylum in the British mission. The Moscow radio criticized the British step only mildly, and reported that Rumanian Government circles were amazed that Radescu should consider himself persecuted. The return of northern Transylvania to Rumania (though its administration remained largely in Russian hands) was celebrated as a great victory for the new regime, which proceeded to consolidate its power by ridiculing the opposition as archaic and arresting some of its leaders, and by contriving that men sympathetic to the regime should displace hostile leaders. Thus, precisely as Dr. Georgi Dimitrov was displaced in the leadership of the Bulgarian Agrarian Party by Petkov and then Obbov, Juliu Maniu was forced from his twenty-five year leadership of the Rumanian Peasant Party by Nicolae Lupu. Strong press censorship and shifts in army assignments were used to silence the opposition. But conservative fears of general expropriations and collectivization proved unfounded. Only the property of condemned collaborators and Germans was confiscated, and industrialists were favored even to the extent that they were exempted from trial as war criminals. The Malaxa plant was restored to its owners, who had a pro-fascist record but were now prepared to support the Communist Party. The Church too lent its support to the new regime. In his statement of October 27 announcing that general elections would be held soon Groza declared that his government did not intend to make risky experiments, that there would be no nationalization of wealth and no "declaration of war against British and American capital." The moderate Communists were disillusioned by Soviet regard for big business and tended to combine with the opposition. The Communists, on the other hand, gained by dissensions within the Democratic Front. The Patriots' Union and the Federation of Labor automatically adhered to the Communists. The Ploughmen's Front (of which Prime Minister Groza was himself leader) was compelled to acquiesce, as were the Socialists, though their leader, C. Titel Petrescu, offered resistance. The conservatism in social questions and also the Church's support of the regime served to reconcile part of the opposition. Despite press censorship and other repressions the regime did in fact allow the opposition considerable scope and was not as ruthless as had been at first charged. In the collaborationists' trials held before the People's Courts in May sentences of 29 death penalties, eight prison terms, and one acquittal were pronounced.

Though adherents of the Groza regime hoped that Rumania would now be granted the status of a co-belligerent, British and American policy opposed such recognition. On August 6, however, General I. Z. Susaikov, acting head of the ACC at Bucharest, presented a statement to Prime Minister Groza announcing Moscow's intentions to resume diplomatic relations with Rumania as a reward for Rumania's contributions to the war effort and her fulfillment of obligations assumed under the armistice agreement. The step bolstered the prestige of the Groza regime, though the United States and British Governments continued to regard it as unrepresentative. Rumanian conservative leaders such as Maniu, Bratianu, and Petrescu, of the Peasant, Liberal, and Socialist Parties respectively, sought to gain the support of the western Allies for a "service" government. Encouraged by the

opposition leaders, by United States and British representations, the Yalta and Potsdam declarations, and the continued unwillingness of Washington and London to deal with the Soviet-sponsored and Communist-dominated Groza government, King Michael asked for Groza's resignation in August. When Groza refused, Michael appealed in writing to the three powers represented in the ACC to assist in the formation of a government which could conclude the peace treaties and be admitted to the United Nations Organization.

The United States and British Governments at once published a favorable reply to the King's request. The Soviet representatives, General Susaikov and Mr. Pavlov, showed their annoyance at the King's measures, of which they had not been informed, and called the intervention of the western powers unilateral and unnecessary. Until this incident Soviet-Rumanian relations had been growing closer. The Soviets had awarded King Michael their highest decoration, the Order of Victory, and Rumania had reciprocated in kind by decorating General Malinovski. Prime Minister Groza, Vice Premier Tatarescu, and other cabinet members, accompanied by General Susaikov, acting head of the ACC in Rumania, and Kavtaradze, Soviet Ambassador to Bucharest, conferred with Stalin in Moscow on September 4. Moscow apparently determined to continue backing the Groza regime, disregarding Michael's complaints and their support by the western Allies, and to bolster the regime agreed to several important measures for alleviating Rumania's economic difficulties. The regime refused to consider any changes in the cabinet, but did seek to conciliate opinion by announcing a reform program to remedy certain conditions which had evoked criticism. The program provided for the completion of agrarian reforms, a revision of governmental machinery and personnel with a view to preparing for genuine elections, abolition of concentration camps and release of all persons not convicted or awaiting trial. Opposition elements in the country were restive, and included moderates among the Communists, who opposed such pro-Russian extremists as Ana Pauker and Vasile Luca, but the regime remained confident that it could weather the storm.

The opposition was disheartened but not slackened by the failure of the Council of Foreign Ministers meeting in London in October to solve the Rumanian crisis. The conference of the Communist Party in the third week of October laid plans for their election campaign and suggested a coalition with the Socialist Party to form a united labor front. The Socialists rejected the bid and reasserted their independence and their criticism of the Communists. The mission of Mr. Mark Ethridge, President Truman's representative, to Rumania, was regarded by the opposition as an encouragement but by the government and press as a mere formality presaging United States recognition. The lifting of censorship on foreign correspondents enabled them to report fully on an impressive demonstration by the opposition in front of the Royal Palace on King Michael's name day, timed to coincide with the arrival of Mr. Ethridge.

By the year's end, however, the opposition's hope of unseating the Groza regime was extremely weak. The announcement on December 22 that the United States and Britain had recognized the Tito government in Yugoslavia led to expectations that the Rumanian and Bulgarian regimes would soon be recognized as well. This seemed well on the way to fulfillment after the meeting of the Big Three Foreign Ministers in Moscow in late Decem-

ber. In the official communiqué issued on December 27, the following decision was announced: The Big Three agreed to advise King Michael to broaden his government by bringing into it a member of the Peasant Party and one of the Liberal Party. This broadened government should then declare for free and unfettered elections. The United States and Great Britain agreed to recognize Rumania when these reforms should have been accomplished. Informed sources stated that the recognition would not necessarily be delayed until the elections had actually taken place. On December 28 it was announced that W. Averill Harriman and Sir Archibald Clark-Kerr, the American and British Ambassadors to Moscow, and Andrei Vyshinski of the Soviet Foreign Office, were preparing to leave for Bucharest to advise King Michael.

RURAL ELECTRIFICATION ADMINISTRATION (REA). An agency created under the Emergency Relief Appropriation Act of 1935 and transferred to the U.S. Department of Agriculture in 1939. Chief: Claude R. Wickard. For a report of its activities in 1945, see **ELECTRIC LIGHT AND POWER**.

RUSSELL SAGE FOUNDATION. A Foundation created in 1907 through a gift of \$10,000,000 by Mrs. Russell Sage, as a memorial to her husband; \$5,000,000 additional was left to the Foundation in Mrs. Sage's will. Its principal purpose is to study social and living conditions in the United States, and to make available to citizens, organized groups, and others such information and proved methods as will assist them to relieve, remedy, or prevent adverse conditions affecting the welfare of their communities. Among the types of activities which in recent years have been carried on by the Foundation's own Departments, or through its grants to agencies with similar purposes, are: adult education, city and regional planning, family welfare, training for social work, study and coordination of community social work programs, studies in the professions, child welfare, leisure-time activities, legal aid, social welfare publications, improvement of race relations, research in the social sciences, methods of relief, improvement of conditions affecting small loans, control of consumer credit, work relations in industry, increasing the public understanding of social work, social statistics, and the relation of the arts to social work. Printed reports of its principal studies are issued by the Foundation, and to assure their greater distribution to interested persons are made available at cost. Among its recent publications are the *Social Work Year Book 1945*, edited by Kurtz; *Law Training in Continental Europe*, by Schweinburg; *Operation Statistics of Selected Family Casework Agencies*, and *Statistics of Medical Social Casework*, by Hurlin, and bibliographies on *Rehabilitation of the Disabled Serviceman and Organized Labor's Participation in Social Work*.

The offices of the Foundation are at 130 East 22 Street, New York 10, N.Y. A social service Library, open to the public, is maintained at the same address. Morris Hadley is President of the Board of Trustees. Shelby M. Harrison is General Director.

RYUKYU (LOOCHOO) ISLANDS. A chain of islands reaching from the Japanese main island of Kyushu to near northern Formosa. They passed under Allied military control partly by conquest in the early months of 1945 and were completely occupied following the surrender of Japan in September, 1945. Area: 921 square miles. Population: 600,-

000 (estimated). Capital: Naha, on Okinawa—the largest island in the group. For an account of the battle in which armed forces of the United States captured Okinawa, see **WORLD WAR**.

ST. PIERRE AND MIQUELON. A French colony comprising two small groups of islands near the south shore of Newfoundland. Area: St. Pierre group—10 square miles; Miquelon group—83 square miles. Total population, 4,120. Capital, St. Pierre. Fishing is the chief industry. Trade (1943): imports 30,338,370 francs; exports 10,259,434 francs. Textiles, wines, salt, and foodstuffs were the chief imports. Cod (fresh and dried) and fish products were the principal exports. Governor: Pierre Garrouste.

SAIPAN. A coral island in the Mariana group of the Japanese Pacific Islands; occupied by United States armed forces in July, 1944. It is about 15 miles long from north to south, and about 4 miles wide. Area, 72 square miles. The population before the war included 40,000 Japanese, 4,000 Chamorras, and 1,000 Kanakas. Garapan, the only town, is on the west side of the island. During peacetime the annual export of sugar was valued at more than \$6,000,000.

SAKHALIN. An island northeast of Japan, in the Sea of Okhotsk. Area, 28,597 square miles. The southern part (south of 50° N.) was under Japanese control from 1905 when it was ceded by Russia in the Treaty of Portsmouth until the surrender of Japan in 1945 when it was occupied by armed forces of the U.S.S.R. According to one of the terms of the Yalta agreement signed by the "Big Three" the southern half of Sakhalin (including adjacent islands), was to be restored to the U.S.S.R. See **KARAFUTO**.

SALVATION ARMY, The. The Salvation Army carried religious and social services to approximately 225 million servicemen and women on 26 fighting fronts during World War II. War urgency needs were met by 3,000 Red Shield Clubs, often improvised huts established on beachheads, in jungles and desert outposts. In the U. S., Salvation Army clubs and those operated through U. S. O. provided personal and accommodation services including mending, wrapping and mailing packages, checking valuables, emergency transportation, financial and legal aid, sleeping accommodations, voice recordings and home hospitality. Salvationists visited approximately 595,000 wounded and sick servicemen in hospitals.

To date, 1,000 mobile canteens have traveled a distance equivalent to 4 times around the world. Many mobiles are equipped with library, radio set, film projector, record player, and can serve 4600 men on one trip. 23 Salvation Army mobile units were attached to the invasion army in France. An auxiliary service to the global land Red Shield canteens was provided in Australia by a motor launch which met sea and land convoys and visited remote outposts on island rivers.

Among recent war-related developments are: a home in France for children whose parents cannot be found; a refugee boys' home and "Warphanage" in China; soldiers' and sailors' rest homes in South America and the Middle East; homes for evacuees, demolition crews and moving units in England after bombings; grocery stores in Canada for stranded families in war boom towns; dining rooms serving meals to war workers' children; restaurants in Belgium for refugees; hostess houses throughout

the U. S. for families and friends of enlisted men.

Evangelical work on the fighting fronts was adapted to circumstances and location. Religious guidance and consolation was given all individuals requesting them, regardless of creed, race or color.

The regular network of rehabilitation services has continued to minister in practical ways to emergency needs of humans.

The year 1945 was marked in the U. S. by a national spiritual campaign; intensification of youth activities; increased war service emphasizing aid to veterans in adjusting to civilian life. The coordination of the work was directed by Commissioner Donald McMillan, National Secretary, National Headquarters, New York City.

SAMOA. A group of 14 islands in the mid-Pacific just below the equator and 4,150 miles southwest of San Francisco. The islands of the group east of 171°W. longitude, called American Samoa, belong to the United States; those west of that line are administered by New Zealand under a mandate of the League of Nations and are known as Western Samoa.

American Samoa. American Samoa includes the island of Tutuila on which the U.S. Naval Station is located; the Manua group, consisting of the islands of Tau, Olosega, Aunu'u, and Ofu; Rose Island; and Swains Island. These islands, with the exception of Swains Island, were acquired on Dec. 2, 1899, through a tripartite agreement with Great Britain and Germany. By joint resolution of Congress, approved Mar. 4, 1925, Swains Island was annexed to American Samoa. All but Rose Island, which is an uninhabited coral atoll, are of volcanic formation. The total area is 76 square miles and the estimated population on July 1, 1941, was 13,273, mainly Polynesian. The seat of government is at the village of Pago Pago, Tutuila, which has the finest harbor in the South Seas. Prior to World War II the population of the naval reservation was about 300; of Pago Pago, 1,000.

The islands are under the control of the Navy Department and are administered by a Naval Governor. Native participation in government consists of a Samoan Council called the Fono which meets annually. Its jurisdiction is limited to advisory functions. Samoans are not citizens of the United States, but owe allegiance to the American flag. Law and order is maintained by the Samoan Guard composed of 36 natives who are enlisted members of the U.S. Marine Corps.

In 1941-42 the average public school enrollment was 2,500, attendance being compulsory for children between the ages of 6 and 15. English is used in public schools and the Samoan language in private schools. Illiteracy in 1930 was lower than in any other U.S. territory—6.3 per cent. Copra, dried coconut meat, is the most important crop. In 1940-41 a total of 862 tons were shipped at a value of \$23,557. Trade (year ended June 30, 1941): \$263,703 for imports and \$93,839 for exports. After May 15, 1941, no unauthorized aircraft or vessels were permitted within three miles of Rose and Tutuila. Governor, Capt. Lawrence Wild, U.S. Navy, who assumed office Aug. 8, 1940.

During 1945 the Hon. Joseph R. Farrington, Delegate from Hawaii, introduced a bill (H.R. 3546) which would extend American citizenship to the natives of American Samoa. Although the Samoans voluntarily ceded their islands to the United States more than 45 years ago, they did not receive the rights of American citizenship as did the Hawaiians, who became citizens with the annexation of the Hawaiian Islands.

Western Samoa. West of American Samoa, less than 100 miles, lies Western Samoa, another group of islands of which the two largest are Savaii and Upolu. Racially and culturally they are similar to American Samoa. Area, 1,133 square miles. Population (July 30, 1941), 62,391, including 58,643 Samoan natives (Polynesians). Capital, Apia, on Upolu. A common indigenous culture and common folkways and mores form the foundation of society in both American and Western Samoa. The natives are Christians of different denominations. There were 12,225 pupils enrolled in the schools in 1941. Copra, cacao, rubber, and bananas are the chief products. Trade (1940): Imports, £165,453; exports, £221,733. For the year ended Mar. 31, 1941, government receipts were £107,980; expenditures, £110,000. During 1940, 100 vessels of 69,475 tons entered the port of Apia.

The United States and New Zealand have taken joint measures for the defense of all the Samoan islands and a large U.S. air base has been constructed on the island of Upolu. Western Samoa is administered by the New Zealand Minister of External Affairs, acting through an Administrator in Apia. On Feb. 24, 1943, A. C. Turnbull was appointed Administrator by the New Zealand Government.

CHARLES F. REID.

SANITATION. While larger cities have sewerage systems and sewage treatment plants, such facilities are lacking or limited in some 10,000 small communities and rural districts, aggregating 30-million population. The U. S. Public Health Service, in cooperation with State health departments, is now preparing an inventory of these and similar needs in such communities. The Service is helping too in the sanitary problems involved in the development of public housing projects. Enlargement and improvement of sewer systems and treating plants are needed in most cities, large and small, and much work of this kind that has been halted by war may soon be resumed. Financing is a troublesome problem, and there is too general a policy of seeking Federal aid. A disconcerting fact in sewage treatment is the discovery of the virus of poliomyelitis (infantile paralysis) in sewage sludge. That is, it has survived passage through the chemical processes, and in the effluent it may reach sources of domestic water supply.

While cities generally encourage the establishment of new industries, warning has been given to consider the character and disposal of wastes, as these may not be amenable to the treatment in the city's sewage disposal plant. Six cities on the east side of San Francisco Bay (Alameda, Albany, Berkeley, Emeryville, Oakland and Piedmont) have approved plans for a joint sewer district. Sanitary districts, as a class of local government units, are having a rapid expansion. Their purpose is to finance, design, build, and operate works for the collection, treatment, and disposal of sewage and industrial wastes.

A tax for use of sewers is being introduced in several cities. For example, Waco, Texas, plans a sewer or garbage tax for revenue, and even proposes to cut off connections if the tax is not paid. But it is doubtful whether health departments or the courts would sustain such drastic action. A county court in Ohio granted a temporary injunction to prevent Columbus from shutting off service to two adjacent communities which had not signed a revised contract with the city. This case has passed to the higher courts. In Pennsylvania, the State supreme court, in October, upheld the au-

thority of the city of Philadelphia to levy a sewer-use tax based on water consumption. Four cities in Virginia finance the building and operation of their sewer systems through service charges which are included in the monthly water bills. Several cities charge neighboring communities for sewer service (as at Columbus, noted above). There are various methods of determining such charges.

Grease and oil in sewage are causing increased trouble in treatment plants. Many industrial wastes also cause extra difficulty and cost in operating these plants, so that special charges are made where these raw wastes are delivered to the sewers or treatment plants. In other cases, the industries are required to treat their wastes before discharging them. In Chicago, the cost of cleaning certain sewers choked by wastes was collected from the firm responsible for the trouble. Another feature of sanitary work is the forced ventilation of sewers, to reduce dangerous gases and offensive odors; also to reduce corrosion of concrete by gases, and to prevent depletion of oxygen in the sewage. Such methods are in use in Los Angeles and in Melbourne, Australia.

There is a growing tendency to make use of gas from sewage digestion. Such gas is used for heating dwellings at Washington, D. C. Sludge gas at Gary, Indiana, provides a large proportion of the power required in the operation of the treatment plant. Engines have been designed which can operate successfully on oil, natural gas or sludge gas.

Collection and disposal of garbage and rubbish is another troublesome phase of municipal sanitation. Collection methods are largely unsatisfactory, as to cost and efficiency. Chicago has approved a bond issue of \$1,500,000 for carrying on this work, and has imposed fines for improper use of garbage cans. In general, municipal collection is preferred to the contract system, the cost being defrayed from general revenue or service charges. Minnesota has a new law permitting the use of service charges, to be included in bills for water supply or sewage disposal.

As to disposal, the most effective method for any individual case depends largely upon local conditions. St. Paul uses garbage for hog feeding. Seattle and Baltimore use sanitary fill, the latter having abandoned incineration in 1944 on account of lack of efficient operators. Incinerators are used at Detroit, Houston, New Orleans, Memphis, etc. Tonawanda, N. Y., has a new incinerator with mechanical stoker, giving a high rate of combustion. Los Angeles County also plans to use incinerators, on account of the smell and smoke at unregulated dumps. Indianapolis has a reduction system, and Newark, N. J., contracts for barge and tug service to carry garbage out to sea. Success with any method depends largely upon efficient operation. In the occupation of Naples, Italy, the sanitary corps of the U. S. Army introduced the sanitary fill or fill-and-cover method, which was effective in eliminating rats and flies at the fill.

A sanitation problem of increasing importance is that of abatement of stream pollution, which is becoming a nation-wide problem. With cities going to new sources to increase their water supplies, they are also increasing the amount of sewage that is discharged. Industrial plants increase the discharge of wastes, and mine drainage may be a serious cause of pollution. A bill for government regulation, in 1936, failed to pass Congress, and later it was shelved by war conditions. In September, 1945, however, similar bills were intro-

duced, with plans for a general program to be prepared by the U. S. Public Health Service.

In Pennsylvania, the State Department of Health is authorized to make grants to municipalities and industries to assist in providing plans for treatment plants. It has ordered some 300 cities and 100 industries to prepare plans for both control of wastes and abatement of pollution. This State is also one of seven cooperating to prevent pollution of the Ohio River. The suit of Illinois against Indiana and certain Indiana cities, for their pollution of Lake Michigan in the area from which Chicago draws its water supply, is still pending. The Potomac River Interstate Commission advises abatement through agreements between the District of Columbia and three interested States.

Michigan, Minnesota, North Carolina, Tennessee, and other States, have "water pollution control" boards or commissions. And the Tennessee Valley Authority is experiencing trouble from pollution of its numerous reservoirs, so that half the people in the T.V.A. district are said to take water from polluted sources. The Colorado State Board of Health has advised construction of several sewage treatment plants, largely in communities which discharge untreated sewage into streams. In the State of Washington, 55 communities have been cited for inadequate or unsanitary sewage disposal. And Columbus, Ohio, faces suits for alleged pollution of the Scioto River. Los Angeles still has its beaches quarantined on account of pollution of the sea from an old sewer outlet; and San Francisco's bond issue for improvements includes means of stopping the city's pollution of the bay.

In continuation of the good-neighbor policy, the U. S. Government is assisting in the much-needed development of sanitary affairs in the countries of Central and South America. This includes engineering and medical advice and financial assistance. Many engineers from those countries are also studying United States methods. The work abroad is handled through the U. S. Public Health Service and the Office of Inter-American Affairs. See Aqueducts, Dams, Water Supply.

E. E. RUSSELL TRATMAN.

SAN MARINO. An independent republic in Italy, near the town of Rimini. Area, 38 square miles; population (1939), 14,545. Capital, San Marino. Chief exports: cattle, wine, building stone. Financial estimates (1939-40) were balanced at 6,009,919 lire. The legislative power is in the hands of the grand council of 60 members elected by popular vote. Two are appointed from this council every six months to act as regents.

SCHOOLS. A report by Francis G. Cornell, Chief, Research and Statistical Service, U.S. Office of Education, showed that preliminary public school enrollment statistics from States for the year 1943-44 indicate a reduction of about 10 percent during four years of war. In 1939-40, enrollments for the continental U.S. were 25,400,000, and average daily attendance was 22,000,000. In 1943-44, enrollment and average attendance were, respectively, 22,700,000 and 19,600,000.

Most of the reduction is attributed to withdrawals of young people into the armed forces, opportunities for employment and a prewar decrease in birth rates. In Apr., 1944, approximately 3,000,000 people of school age, who normally would have been in school or college, were in the armed forces or in the civilian labor force.

Not so well known is the apparent scope of geographical shifts in school population due to an unprecedented high rate of migration of the civilian population. The September, 1945, estimate of the U.S. Bureau of the Census places the average annual intercounty migration for the period 1941-45 at 4,700,000. This is roughly two-thirds more than the equivalent figure of 2,800,000 for the prewar period 1935 to 1940. The impact of this wartime population movement on the school population is indicated by the fact that almost 3,500,000 of the 15,300,000 migrants were under 14 years of age. Relatively large numbers of migrants were adult workers shifting to war production areas. Of the population 14 and over, 12.7 percent were migrants during the war period. Nevertheless 10.8 percent of persons under 14 years of age were also migrants.

The extent of the effect of migration upon interstate school attendance shifts is evident from the high correlation (correlation coefficient of .80) between wartime changes in average daily attendance and wartime changes in civilian population. These data for the 39 States for which statistics are available are shown in the accompanying table. Though the population figures cover a 3-year period only, and are therefore not strictly comparable to the 4-year span of the attendance statistics, the relationship is striking.

WARTIME CHANGES IN SCHOOL ATTENDANCE AND CIVILIAN POPULATION BY STATES

[All figures in thousands except percents]

State	Average Daily Attendance			Estimated Civilian Population ^b		
	1940	1944	Percent 1944 of 1940	1940	1945	Percent 1945 of 1940
1	2	3	4	5	6	7
All States reporting ^a ..	18,385	16,387	89.1	108,901	105,572	96.9
Ala.....	567	527	92.9	2,822	2,716	96.2
Ark.....	373	320	85.8	1,948	1,734	89.0
Calif.....	1,057	1,047	99.1	6,858	7,877	114.9
Conn.....	256	217	84.8	1,707	1,746	102.3
Del.....	39	36	92.3	266	273	102.6
Florida.....	327	313	95.7	1,891	2,011	106.3
Ga.....	584	547	93.7	3,100	2,975	96.0
Ind.....	590	569	96.4	3,427	3,379	98.6
Ky.....	493	414	84.0	2,841	2,547	89.7
La.....	398	361	90.7	2,359	2,314	98.1
Maine.....	149	140	94.0	845	782	92.5
Md.....	257	246	95.7	1,813	1,982	109.3
Mass.....	630	518	82.2	4,314	4,092	94.9
Mich.....	862	831	96.4	5,253	5,374	102.3
Minn.....	454	392	86.3	2,792	2,524	90.4
Miss.....	474	445	93.9	2,183	1,995	91.4
Mo.....	599	531	88.6	3,784	3,522	93.1
Neb.....	243	200	82.3	1,314	1,175	89.4
Nev.....	18	19	105.6	110	131	119.1
N.H.....	67	58	86.6	491	453	92.3
N.J.....	635	540	85.0	4,157	4,077	98.1
N.Y.....	1,920	1,587	82.7	13,463	12,440	92.4
N.C.....	790	728	92.2	3,566	3,344	93.8
N.D.....	125	100	80.0	642	536	83.5
Ohio.....	1,122	1,001	89.2	6,905	6,822	98.8
Okl.....	485	386	79.6	2,333	1,988	85.2
Ore.....	166	167	100.6	1,088	1,172	107.7
Penn.....	1,668	1,372	82.3	9,896	9,266	93.6
R.I.....	100	81	81.0	708	694	98.0
S.C.....	385	364	94.5	1,886	1,788	94.8
S.D.....	120	98	81.7	643	544	84.6
Tenn.....	537	492	91.6	2,916	2,810	96.6
Utah.....	124	122	98.4	550	584	106.2
Vt.....	55	48	85.7	359	316	88.0
Virginia.....	494	458	92.7	2,850	2,768	104.5
Wash.....	275	279	101.5	1,732	1,904	109.9
W.Va.....	412	360	87.4	1,902	1,731	91.0
Wis.....	487	433	88.9	3,137	2,944	93.8
Wyo.....	47	40	85.1	250	236	94.4

^a Reports were not received from the following States: Arizona, Colorado, Idaho, Illinois, Iowa, Kansas, Montana, New Mexico, Texas. ^b U. S. Department of Commerce, Bureau of the Census. *Population—Special Reports. Series P-44, No. 17, August 28, 1944.*

Summer school sessions in the elementary school level in 142 school systems showed an enrollment total of 48,087 in 1944, a gain of 10.1 percent over the 1943 figure; and on the high school level in 220 systems the enrollment totalled 111,731 as compared with 95,459 in 1943, representing a gain of 17 percent.

In the five years from 1939-40 to 1944-45 there was a decrease of approximately 68,000, about 7.4 percent, in the total number of positions for teachers, supervisors, principals and other instructional staff.

Approximately 168,000 or 20.4 percent of the teaching positions in the fall of 1944 were held by "new" teachers, persons who had not taught in that position the previous year. Approximately 5,000 positions were reported vacant for 1944-45.

From the end of the school year in June 1944 to Oct. 16, 1944, approximately 138,000 teachers left the positions they held in 1943-44 and all but about 50,000, who went to other teaching jobs, left the profession. In addition to about 2,500 who entered the armed forces during this period, over 14,000 women teachers left teaching, for which they had prepared, to take a job in government or industry. Almost as many male teachers left to go into business and industry as into the armed forces during this period.

DECREASE IN NUMBER OF INSTRUCTIONAL STAFF 1939-40 TO 1944-45

School Year	Number	Percent Decrease	
		From Previous Year	From 1939-40
1939-40	911,800	...	...
1940-41	907,700	0.45	0.45
1941-42	898,000	1.07	1.51
1942-43	877,000	2.26	3.74
1943-44*	862,800	1.70	5.37
1944-45*	844,100	2.17	7.43

* Estimated.

SCIENTIFIC RESEARCH AND DEVELOPMENT, Office of (OSRD). A United States agency, established by executive order, June 28, 1941, to assure adequate provision for research on scientific and medical problems relating to the national defense. Dr. Vannevar Bush, President of the Carnegie Institution of Washington, is Director. The headquarters are located at 1530 P Street, N. W., Washington, D. C. For details of organization, see 1943 YEAR BOOK.

Reports of progress and of results of OSRD activities, by reason of the nature of their subject matter, have not been generally available. Ultimate publication is dependent upon security declassification by the services. Journal articles are appearing with increasing frequency; a limited number of technical monographs for public use are in preparation.

VANNEVAR BUSH.

SECRET SERVICE, U.S. A division of the U.S. Department of the Treasury, charged with the protection of the President, the suppression of counterfeiting, safeguarding of the money and securities handled by the Government, and the investigation of crimes relating to the Department of the Treasury. (See YEAR BOOK for 1941 for details.) Chief: Frank J. Wilson.

SECURITIES AND EXCHANGE COMMISSION (SEC). An independent agency of the U.S. Government which has the following functions: Supervision of registration of security issues and suppression of fraudulent practices in the sale of securities under the Se-

curities Act of 1933; supervision and regulation of transactions and trading in outstanding securities, both on the stock exchanges and in the over-the-counter markets, as provided in the Securities Exchange Act of 1934; regulation of public utility holding companies under the Public Utility Holding Company Act of 1935; supervision of indentures used in the public offering of new security issues as provided under the Trust Indenture Act of 1939; registration and regulation of investment companies and investment advisers under the Investment Company Act and the Investment Advisers Act of 1940; and the preparation of advisory reports on plans, and participation as a party, in corporate reorganizations under Chapter X of the National Bankruptcy Act. Chairman: Ganson Purcell. See FINANCIAL REVIEW under *Financial Regulation*.

SELECTIVE SERVICE SYSTEM. Procurement of manpower for the waging of global warfare, at the same time leaving sufficient manpower at home to provide a steady flow of war materiel and to protect the civilian economy and social structure, loomed as one of the nation's biggest problems when news came that the Japanese had attacked at Pearl Harbor on Dec. 7, 1941.

The formula had long since been worked out. Enactment on Sept. 16, 1940, of the Selective Training and Service Act authorized the President to establish a Selective Service System, including: a Director of Selective Service; Local Boards; Appeal Boards and agencies of Appeal; "and to utilize the services of any and all departments of the United States Government; to delegate and to provide for the delegation of any authority vested in him under the Act."

The Act provided: "Except as otherwise provided in this Act, it shall be the duty of every male citizen of the United States, and of every male alien residing in the United States, who, on the day or days fixed for the first or any subsequent registration, is between the ages of twenty-one and thirty-six, to present himself for and submit to registration at such time or times and place or places, and in such manner and in such age group or groups, as shall be determined by rules and regulations prescribed hereunder."

"Except as otherwise provided in this Act, every male citizen of the United States, and every male alien residing in the United States who has declared his intention to become such a citizen, between the ages of twenty-one and thirty-six at the time fixed for his registration, shall be liable for training and service in the land or naval forces of the United States. The President is authorized from time to time, whether or not a state of war exists, to select and induct into the land and naval forces of the United States for training and service, in the manner provided in this Act, such number of men as in his judgment is required for such forces in the national interest."

The Act provided that not more than 900,000 men were to be in training at one time, placed a twelve month limitation on length of service unless Congress should declare the national interest imperiled, and contained other provisions making it strictly a peacetime measure, but so constituted that the System it set up would be ready to meet the demands of war, should the emergency arise, with the adoption of a few simple amendments.

The organization formed under the regulations was composed of a Director of Selective Service appointed by the President and responsible to him; State Directors appointed by the President upon

recommendation of the governors of the States; at least one local board in each county or similar political subdivision appointed by the President upon recommendation of the governors; one or more reemployment committeemen attached to each local board to advise and protect veterans in their rights to obtain their old jobs back as provided in the Act; a medical examiner attached to each board; a government appeal agent to carry appeals in behalf of the registrant or the government; and one or more boards of appeal for each state, members of which were appointed by the President upon recommendation of the governor.

The Act's termination date was set for May 15, 1945, except for certain provisions, including especially those having to do with veterans' reemployment rights.

Toward the end of 1944 the Act was extended to May 15, 1946, unless the President shall proclaim, or Congress should declare by concurrent resolution, a termination of hostilities.

The Act was sponsored by the Military Training Camps Association, a group of civilians, but in pattern it closely followed the draft of legislation prepared after many years of study and planning by and under the supervision of a joint Army and Navy committee appointed in 1926 by authority of the National Defense Act of 1917. This committee was successively headed by Maj. George R. Allin, Maj. Frank B. Mallon, Maj. Richard F. Cox, Lt. Col. Sanderford Jarman, and Maj. Lewis B. Hershey.

The committee prepared and supervised extensive correspondence courses for a selected group of reserve officers and National Guard officers on proposed Selective Service legislation and made plans for the raising of manpower to meet any military call. Beginning in 1935, regional conferences were held each year and the planning was minute and detailed.

Consequently, it was only a matter of weeks after passage of the Act when more than 17 million men ages 21 through 35 were registered—with the assistance of more than a million volunteer workers; State and local units were organized and functioning; registrants were filling out classification questionnaires and being classified by their Local Boards; and toward the end of the year, they were beginning to trickle into induction stations.

The four classes and their subdivisions into which the registrants were to be placed were announced three weeks after enactment of the law:

Class I: Men available for military service.

Class II: Men necessary in their civilian activity.

Class III: Men with dependents.

Class IV: Officials deferred by law; those deferred because they were physically, mentally, or morally unfit; ministers and others.

A comparison of these classifications with those which were in effect after the declaration of war, and after the enemy's capitulation, will disclose no basic changes in the system, with the exception of the classification for dependency. Dependency, as such, was later removed as ground for deferment.

Less than a week after the attack on Pearl Harbor, Congress passed a joint resolution removing the territorial restrictions on the use of the Army and, on December 20, amended the Selective Training and Service Act of 1940 with provisions extending the period of military service from one year to the duration of the war, plus six months. Likewise removed was the restriction that limited the number of inductees in training at any one time to 900,000. The registration age was extended by another law from 18 to 65 years. Liability for

service was not extended at that time, however, beyond the 20 to 45 year old group.

Toward the end of 1944 Maj. Gen. Lewis B. Hershey, Director of Selective Service, summed up the manpower situation with the observation that "the pools of young manpower, from which selection can be made for service in the armed forces or for temporary deferment in work supporting the war effort, have dwindled." Adding that both the needs of the armed forces and the civilian activities which support them "have become altered and specialized," General Hershey declared that both were vital for victory and "must be maintained in effective operation." But over and above that, General Hershey stressed that "where there is conflict in their demands, the weight in the decision must be given to the armed forces."

General Hershey complimented the Selective Service System on the fact that considerably more than 30 million men 18 to 45 years old had been registered and classified, that approximately 10 million of those 18 to 38 had been selected and supplied to the armed forces. General Hershey noted with pride that "of the approximately 24,600 Local Board members, who form the front line of the Selective Service System—who serve without pay and must bear the brunt of the criticism which attends all human endeavor, as well as do the bulk of the work—more than 50 percent have been in continuous service since 1940."

On Jan. 1, 1945, the national manpower pool of registrants, ages 18 through 37, was as follows:

Total living registrants	22,084,000
Class I-A	797,000
(Note:—Class I-A figures include men being processed for pre-induction physical examination, postponed inductions, appeals, etc.)	
Class I-A	3,000
(Note:—Men being processed for pre-induction examination, etc., who, without local board approval, have left employment for which they were deferred SS Reg 622.22-2)	
Class IV-F (rejected for military service)	3,592,000
Unclassified	61,000
Classes II-A and II-B (deferred in occupations other than agriculture)	4,198,000
Classes II-A (L), II-A (F), II-B (L), and II-B (F) (deferred in occupations other than agriculture and not qualified for general military duty)	884,000
Classes II-C and III-C (deferred in agriculture)	1,472,000
Classes II-C (L) and II-C (F) (deferred in agriculture and not qualified for general military duty)	132,000
Class III-D (deferred as hardship cases)	51,000
Class I-C (registrants who have become members of the armed forces)	10,753,000
(Note:—Includes a substantial number who have been discharged or transferred to the Reserves. Does not include registrants 38 years of age or over, women, or nonregistered enlisted men, i.e., men enlisted at age 17, etc.)	
All other classes	161,000

It will be seen that at the beginning of the year 5,670,000 registrants, or more than one-fourth of all registrants 18 through 37 years old, were deferred in industry and agriculture, not including 996,000 also engaged in those activities who had been found unacceptable for general military service.

Registrants deferred in essential war production totaled 4,198,000, or 19 percent. Deferments in agriculture totaled 1,472,000, or 6.6 percent. The striking difference between industrial and agricultural deferments, however, was in the age composition of each class.

Of the registrants deferred in agriculture, 23.2 percent were 18 through 25 years old, whereas only 2.6 percent of the men deferred in industry were in that age group. The 26-to-29 group accounted for 19.8 percent of Classes II-A and II-B

(industry) and 20.1 percent of Class II-C (agriculture). Of the industrially deferred, 77.6 percent were over 29 years of age as compared with 56.7 percent of the agriculturally deferred. In Classes II-A and II-B with an (L) or (F) designation, indicating they had been rejected for general military service, 32.1 percent were under 26 years of age, whereas 67.1 percent of Classes II-C (L) and II-C (F) were in this age group.

The cry was for all the physically fit registrants under 30 years of age who could possibly be spared from war industry to meet the needs of the fighting forces, for the Germans had broken through at Ardennes in December, the Germans were fighting with suicidal desperation to turn defeat into victory. Although their defeat was pre-ordained, it still seemed a long way off in January of 1945. In effect, President Roosevelt told Congress, Selective Service and the American people as much. The Army and Navy declared they must have 750,000 men before July 1 of the same year, the best men available.

The Director of War Mobilization and Reconversion furnished Selective Service with the War Manpower Commission's "List of Essential Activities," revised to specify those deemed most critical. This list was subject to change.

Use of this list was recommended to Local Boards as a guide in determining selections for induction among the age group 26 through 29, also that such registrants be called, to the fullest extent possible, in the following order:

- (1) Registrants not employed in an activity appearing on the essential activities list;
- (2) Registrants whom the local board found to be employed in relatively unimportant jobs in essential but not critical activities;
- (3) Registrants whom the local board found to be employed in relatively unimportant jobs in critical activities;
- (4) Registrants whom the local board found to be engaged in relatively more important jobs in essential activities;
- (5) Registrants whom the local board found to be engaged in more important jobs in critical activities.

Local Boards were informed, however, that if a replacement was available for a registrant, he should be classified as available for induction regardless of his place in the groups listed above.

Since requirements of the armed forces were primarily for men under 30 years of age, the local boards were told the test of "regularly engaged in" an activity in support of the national health, safety, or interest or an activity in war production should still be the test applied to a registrant in the age group 30 through 37 or to a registrant of any age who would be classified in Class IV-F were he not employed in a war supporting activity, but who by reason of his employment was classified in Class II-A or Class II-B and identified by the letter (L) or (F). Registrants in the age group 18 through 37 who left the employment for which they were occupationally deferred without the consent of their local board were classified in a class available for service.

Regulations revised in February concerned registrants 18 through 33 and the primary cause was the fact that the supply of men in the most desirable group, under 26, was virtually exhausted and the number of men 26 through 29 was extremely limited.

The revised policy, therefore, anticipated increasing necessity for induction of physically fit registrants over 29 years of age to fill calls, espe-

cially of those under the age of 34, and made distinction in the standards for those 30 through 33 and those 34 through 37. A registrant 30 through 33, to be deferred, had to be "necessary to" as well as "regularly engaged in" an activity in war production or in support of the national health, safety, or interest; while a registrant 34 through 37 need only be "regularly engaged in" such an activity.

A plan to permit occupational deferment of a limited number of men under 30 years of age who held "key" positions in war industry and were indispensable and irreplaceable was worked out by a committee appointed by Director of War Mobilization and Reconversion, of which the Director of Selective Service was a member.

On May 1, shortly before the defeat of Germany, the manpower pool of registrants 18 through 37, was as follows:

	Total	Percent
Total living registrants	22,023,000	100.0
Class I-A	1,024,000	4.6
(Note:—Includes men being processed for pre-induction examination, postponed inductions, appeals, etc.)		
Class I-A	52,000	0.2
(Note:—Men being processed for pre-induction examinations, etc., who, without local board approval, have left employment for which they were deferred.)		
Class IV-F (rejected for military service)	3,253,000	14.8
Class II-A and II-B (deferred in occupations other than agriculture most of whom have not had physical examination)	3,451,000	15.7
Classes II-A(L), II-A(F), II-B(L), and II-B(F) (deferred in occupations other than agriculture and not qualified for general military service)	1,325,000	6.0
Classes II-C and III-C (deferred in agriculture most of whom have not had physical examination)	1,297,000	5.9
Classes II-C(L) and II-C(F) (deferred in agriculture and not qualified for general military service)	241,000	1.1
Class III-D (deferred as hardship cases)	46,000	0.2
Unclassified	60,000	0.3
Class I-C (registrants who have become members of the armed forces) (Note: Includes registrants discharged or transferred to the Reserves. Does not include registrants 38 or over, women, or nonregistered enlisted men, i.e. men enlisted at 17, etc.)	11,119,000	50.5
All other classes (includes public officials, ministers and divinity students, conscientious objectors, and ineligible aliens)	155,000	0.7

In June it was announced that beginning in July there would be a reduction in calls from an average of around 120,000 a month to 90,000, but statistics showed that it would be impossible for Local Boards to fill their calls from among registrants under 26 years of age. The boards were advised, consequently, to "keep watchful eye" on the 26 through 29 age bracket, as well as on registrants 18 through 25 who had been occupationally deferred.

Liberalization of occupational deferment policies also followed defeat of Germany in order to reduce the total number of men to be inducted in the 30 through 37 year old group—particularly those who were fathers and those engaged in work useful to the community. Local Boards were instructed to review the cases of registrants ages 18 through 25 who had previously been rejected for general military service or found qualified for limited service only and to forward for pre-induction reexamination those who they believed might be qualified for military service.

A memorandum sent to Local Boards observed that cutbacks in war plants would make older men available for war production jobs.

Revised requirements provided that to be eligible for occupational deferment a registrant 30 through 33, as well as a registrant 34 through 37, need merely be "regularly engaged in an activity in support of the national health, safety, and interest or useful to the community, or in an activity in war production or in an agricultural occupation or endeavor essential to the war effort." It was previously required that registrants 30 through 33 be found "necessary to" as well as "regularly engaged in" the occupations described in order to be eligible for occupational deferment.

On August 14, the same day that he announced the capitulation of Japan, President Truman lowered the age of acceptability for induction from under 38 to under 26 years old, except for volunteers. The President also decreed a substantial decrease to approximately 50,000 a month in Selective Service calls, and local boards were immediately instructed accordingly.

Later it was announced that all registrants classified II-B, defined as "necessary to and regularly engaged in an activity in war production" would be transferred to Class II-A, defined as a registrant found to be "necessary to and regularly engaged in an activity in the national health, safety and interest." In other words, Class II-B was eliminated.

Definition of the term "national health, safety and interest" was defined to include:

"(1) the production and services required to maintain the armed forces of the United States during the period of the occupation of enemy territory; (2) research, development and manufacturing of weapons or other items necessary to the maintenance of adequate national defense; (3) transportation and other activities required for the demobilization of our armed forces; (4) activities and services required for an expeditious reconversion from a wartime to a peacetime economy; and (5) other activities which the local board considers essential on a national or local basis."

Changes in procedure to be followed by employers requesting occupational deferment of their employees was announced at the same time.

The Local Boards were also instructed to give special consideration under specified conditions to registrants age 18 through 25 pursuing a full-time course of study in medicine, dentistry, veterinary medicine, or osteopathy, until their graduation.

Special consideration was also given registrants in national defense projects and key personnel in reconversion activities.

Other actions taken to liberalize deferment policies for students included: (1) amendment of regulations providing for the postponement of induction of high school students before they were 18 years old, until they were graduated or until they became 20 years of age, whichever was the earlier, with the provision that their course of instruction be pursued "continuously and satisfactorily"; instructions to Local Boards to give serious consideration, under specified conditions, to the occupational deferment request of any registrant accepted by an accredited college or university as a candidate for a Master's degree or a Doctor's degree in the physical sciences or engineer courses; likewise for teachers of the physical sciences and engineering and those engaged in research in accredited colleges and universities.

The Local Boards, in this connection, were told by General Hershey that the demands of long

range national interest require a resumption of the advanced studies for men having enough technical and scientific qualifications and that the deferment plan was set up "in order to fully develop the technical and scientific skills which have been acquired and to provide for adequate teaching facilities for returning veterans who desire to resume their studies in these fields."

Results of a survey showing that the number of male students enrolled in scientific courses in Army and Navy Special Student Programs during World War II virtually offset the loss, through induction, in the number of male scientific students in colleges and universities were released by National Headquarters of Selective Service in December.

The survey revealed that although male scientific students (dental, medical, engineering and veterinarian) declined from 141,346 in 1937 to 53,719 in 1943—a decline of 87,627—the number of students enrolled in scientific courses in the Army-Navy Special Student Programs (ASTP and V-12) totalled approximately 85,000.

On that basis the total number of scientific students, therefore was under 3,000 less in 1943 than in 1937.

In November it was announced that conscientious objectors who had served in Civilian Public Service Camps for 4 years or more, regardless of age, were to be discharged, in accordance with the general plan of demobilization.

All conscientious objectors 38 years of age or over who were assigned to work of national importance had been discharged, and those who had two or more years in Civilian Public Service Camps and who had reached the 35th anniversary of the date of their birth, were being processed for release.

At the end of December there were approximately 7,000 conscientious objectors assigned to the 150 Civilian Public Service Camps and Projects. The peak number was approximately 8500. Rate of discharge was slightly below that of the armed forces.

Close to the end of the year 1945 the approximate manpower picture, registrants 18 through 25, was as follows:

	Total Ages 18-25		Age Groups	
	Number	Percent	18-21	22-25
Total living registrants.....	8,818,000	100.0	3,187,000	4,768,000
I-C.....	6,228,000	70.8	2,220,000	3,843,000
IV-F.....	1,288,000	14.6	526,000	599,000
I-A, I-A-O, I-A, I-A(B).....	312,000	3.5	62,000	49,000
Unclassified.....	133,000	1.5	24,000	48,000
II-A.....	105,000	1.2	35,000	45,000
II-A(L) & II-A(F).....	304,000	3.5	118,000	174,000
II-C.....	225,000	2.6	92,000	101,000
II-C(L) & II-C(F).....	163,000	1.9	73,000	75,000
III-D.....	12,000	0.1	4,000	6,000
I-G, IV-B, C, D, E and obsolete.....	48,000	0.5	15,000	28,000

In June, after the defeat of Germany, but before the fall of Japan, General Hershey declared that the Local Selective Service Boards "have shown the world that democracy can operate as efficiently in war as during peace," and he added:

"I have the utmost confidence that they will continue to function with fairness and efficiency in the even more difficult task presented by increasing demobilization that must be synchronized with continuing mobilization.

"Today, Selective Service has a three-fold task: First, to supply the men needed by the armed

forces to replace those lost in combat and those who are being released after long and difficult service; second, to select men for induction so as to cause a minimum of disturbance to industry, transportation, and agriculture; and third, to restore the serviceman discharged under honorable conditions to his former job or to aid him when necessary in finding new employment."

General Hershey referred to Section 8 of the Selective Training and Service Act, which places responsibility for protecting veterans' reemployment rights on Selective Service and provides for the reinstatement in their former positions of discharged members of the land or naval forces under the following conditions:

That the veteran receive a certificate of satisfactory service; that he still be qualified to perform the duties of his position; that he make application for reinstatement within 90 days; that the restoration be not unreasonable or impossible because of the employer's changed circumstances; that the position held was with a private employer or the Federal government; that the position was other than temporary; that the veteran must have left such a position in order to perform service.

Similar reemployment rights, under approximately similar conditions, have been extended to veterans of the United States Public Health Service and the Merchant Marine in other legislation.

The Selective Service Act provides that after a veteran is restored to his position he shall be considered as having been on furlough or leave of absence during his period of service; he shall be so restored without loss of seniority; he shall be entitled to participate in insurance and other benefits offered by the employer pursuant to established rules and practices at the time he entered service; he shall not be discharged from such position without cause within one year after restoration.

The legislation applies to female as well as male veterans.

The Veterans Assistance Program of the Selective Service System has three main objectives, according to a comprehensive statement issued by Selective Service in September of 1945, as follows:

"(1) To assist veterans of World War II in obtaining reemployment in former positions, or positions of like seniority, status, and pay, and to assist them in obtaining new employment, where desired;

"(2) To furnish information to veterans and to the public regarding rights, benefits, and privileges of veterans under existing Federal, State, and local laws, and to refer inquirers to the proper agency, organization, or person where such rights can most readily be obtained; and

"(3) To stimulate National, State, and community awareness of their responsibilities for providing sufficient job opportunities to accomplish full employment for veterans.

"This program is designed to be carried out through the full cooperation of all Selective Service agencies and personnel, compensated and uncompensated."

There are 55 State Organizations (including New York State Procurement Office), 6,443 Local Boards, and 505 Appeal Boards comprising the Selective Service System.

Near the end of 1945, there were 198,943 persons connected with the System. Of this number 181,707 who were uncompensated were divided as follows: 24,276 Local Board members, 7,889 Government Appeal Agents, 75,827 members of Advisory Boards for Registrants, 28,234 Examining Physicians, 7,394 Examining Dentists, 2,-

514 members of Boards of Appeal, 8,497 members of Medical Advisory Boards, 18,096 Re-employment Committeemen, 8,449 Advisers and Field Agents of the Medical Survey Program, 1 State Director, and 530 Special Advisers and consultants.

On January 1, 1945, executive officers of the Selective Service System were as follows:

Director:—Maj. Gen. Lewis B. Hershey

Deputy Director:—Col. Carlton S. Dargusch

Asst. Director, Presidential Appeals and Advisory:—Col. John D. Langston

Asst. Director, Camp Operations:—Col. Lewis F. Kosch

Asst. Director, Post War Plans:—Col. Victor J. O'Kelliher

Chief Liaison and Legislative Officer:—Col. Louis H. Renfrow

Executive Asst. to the Director:—Col. Campbell C. Johnson

General Counsel:—Col. George H. Hafer

Budget Officer:—Lt. Col. Arthur R. Boone

Chief Information Officer:—Col. James T. Coatsworth

Planning Officer:—Col. William Hart

Adjutant General:—Col. Edmund H. Jones

Presidential Appeals Officer:—Col. John N. Andrews

Medical Consultant:—Col. Richard H. Eanes

Special Assignments Officer:—Lt. Col. Joseph H. Berry, Jr., USMC

LEWIS B. HERSHEY.

SENATE, U.S. The following is an alphabetical list of the members of the U.S. Senate, 79th Congress convening in 1946. Names of Democratic Senators are shown in roman type and Republicans in italic; there is also one Progressive member, LaFollette of Wisconsin. The date of expiration of service is in all cases January 2, of the year named.

The office of President of the Senate, left vacant by Harry S. Truman, has not been filled. President pro tempore of the Senate is Kenneth McKellar; Secretary, Leslie L. Biffle; Majority Leader, Alben W. Barkley, Kentucky; Minority Floor Leader, Wallace H. White, Jr., Maine.

For a list of the Senate of the 78th Congress, see **YEAR BOOK** for 1943, p. 564-5. For the activities of the 78th Congress during 1945, see **UNITED STATES** under *Congress*.

<i>Names</i>	<i>Residence</i>	<i>Service</i>
<i>George D. Aiken</i>	Putney, Vt.	1941-1951
<i>Charles O. Andrews</i>	Orlando, Fla.	1936-1947
<i>Warren R. Austin</i>	Burlington, Vt.	1931-1947
<i>Joshiah W. Bailey</i>	Raleigh, N.C.	1931-1949
<i>Joseph H. Ball</i>	St. Paul, Minn.	1943-1949
<i>John H. Bankhead, 2d</i>	Jasper, Ala.	1931-1949
<i>Alben W. Barkley</i>	Paducah, Ky.	1927-1951
<i>Theodore G. Bilbo</i>	Poplarville, Miss.	1935-1947
<i>Owen Brewster</i>	Dexter, Maine	1941-1947
<i>Styles Bridges</i>	Concord, N.H.	1937-1949
<i>Frank P. Briggs</i>	Macon, Mo.	1945-1947
<i>C. Wayland Brooks</i>	Chicago, Ill.	1940-1949
<i>C. Douglas Buck</i>	Wilmington, Del.	1943-1949
<i>Harlan J. Bushfield</i>	Miller, S.Dak.	1943-1949
<i>Hugh Butler</i>	Omaha, Neb.	1941-1947
<i>Harry Flood Byrd</i>	Berryville, Va.	1933-1947
<i>Homar E. Capehart</i>	Washington, Ind.	1945-1951
<i>Arthur Capper</i>	Topeka, Kans.	1919-1949
<i>E. P. Carville</i>	Reno, Nev.	1945-1947
<i>Dennis Chavez</i>	Albuquerque, N.Mex.	1935-1947
<i>Tom Connally</i>	Marlin, Tex.	1929-1947
<i>Guy Cordon</i>	Roseburg, Ore.	1944-1949
<i>Forrest C. Donnell</i>	Webster Groves, Mo.	1945-1951
<i>Sheridan Downey</i>	Laguna Beach, Calif.	1939-1951
<i>James O. Eastland</i>	Ruleville, Miss.	1943-1949
<i>Allen J. Ellender</i>	Houma, La.	1937-1949
<i>Homar Ferguson</i>	Detroit, Mich.	1943-1949
<i>J. W. Fulbright</i>	Fayetteville, Ark.	1945-1951
<i>Walter F. George</i>	Vienna, Ga.	1922-1951
<i>Peter G. Gerry</i>	Providence, R.I.	1935-1947
<i>Carter Glass</i>	Lynchburg, Va.	1920-1949

<i>Name</i>	<i>Residence</i>	<i>Service</i>
<i>Charles C. Gossett</i>	Nampa, Idaho	1945-1949
<i>Theodore Francis Green</i>	Providence, R.I.	1937-1949
<i>Joseph F. Guffey</i>	Pittsburgh, Pa.	1935-1947
<i>Chan Gurney</i>	Yankton, S.Dak.	1939-1951
<i>Thomas C. Hart</i>	Sharon, Conn.	1945-1947
<i>Carl A. Hatch</i>	Clovis, N.Mex.	1933-1949
<i>Albert W. Hawkes</i>	Montclair, N.J.	1943-1949
<i>Carl Hayden</i>	Phoenix, Ariz.	1927-1951
<i>Bourke B. Hickenlooper</i>	Cedar Rapids, Iowa	1945-1951
<i>Lister Hill</i>	Montgomery, Ala.	1938-1951
<i>Clyde R. Hoey</i>	Shelby, N.C.	1945-1951
<i>James W. Huffman</i>	Columbus, Ohio	1945-1947
<i>Edwin C. Johnson</i>	Craig, Colo.	1937-1949
<i>Olin D. Johnston</i>	Spartanburg, S.C.	1945-1951
<i>Harley M. Kilgore</i>	Beckley, W.Va.	1941-1947
<i>William F. Knowland</i>	Oakland, Calif.	1945-1947
<i>ROBERT M. LAFOLLETTE, JR.</i>	Madison, Wis.	1925-1947
<i>William Langer</i>	Bismarck, N.Dak.	1941-1947
<i>Scott W. Lucas</i>	Havana, Ill.	1939-1951
<i>Warren G. Magnuson</i>	Port Blakely, Wash.	1944-1951
<i>Burnet R. Maybank</i>	Charleston, S.C.	1941-1949
<i>Patrick McCarran</i>	Reno, Nev.	1933-1951
<i>John L. McClellan</i>	Camden, Ark.	1943-1949
<i>Ernest W. McFarland</i>	Florence, Ariz.	1941-1947
<i>Kenneth McKellar</i>	Memphis, Tenn.	1917-1947
<i>Brien McMahon</i>	Norwalk, Conn.	1945-1951
<i>James M. Mead</i>	Buffalo, N.Y.	1938-1947
<i>Eugene D. Millikin</i>	Denver, Colo.	1941-1951
<i>Hugh B. Mitchell</i>	Everett, Wash.	1945-1947
<i>E. H. Moore</i>	Tulsa, Okla.	1943-1949
<i>Wayne Morse</i>	Eugene, Ore.	1945-1951
<i>Abe Murdock</i>	Beaver, Utah	1941-1947
<i>James E. Murray</i>	Butte, Mont.	1934-1949
<i>Francis J. Myers</i>	Philadelphia, Pa.	1945-1951
<i>W. Lee O'Daniel</i>	Port Worth, Tex.	1941-1949
<i>Joseph C. O'Mahoney</i>	Chevenne, Wyo.	1934-1947
<i>John H. Overton</i>	Alexandria, La.	1933-1951
<i>Claude Pepper</i>	Tallahassee, Fla.	1936-1951
<i>George L. Radcliffe</i>	Baltimore, Md.	1935-1947
<i>Clyde M. Reed</i>	Parsons, Kans.	1939-1951
<i>Chapman Revercomb</i>	Charleston, W.Va.	1943-1949
<i>Edward V. Robertson</i>	Cody, Wyo.	1943-1949
<i>Richard B. Russell</i>	Winder, Ga.	1933-1949
<i>Leverett Saltonstall</i>	Boston, Mass.	1945-1949
<i>Henrik Shipstead</i>	Carles, Minn.	1923-1947
<i>II. Alexander Smith</i>	Princeton, N.J.	1944-1947
<i>William A. Starnfill</i>	Hazard, Ky.	1945-1949
<i>Tom Stewart</i>	Winchester, Tenn.	1939-1949
<i>Robert A. Taft</i>	Cincinnati, Ohio	1939-1951
<i>Glen H. Taylor</i>	Pocatello, Idaho	1945-1951
<i>Elmer Thomas</i>	Medicine Park, Okla.	1927-1951
<i>Elbert D. Thomas</i>	Salt Lake City, Utah	1933-1951
<i>Charles W. Tobey</i>	Tempe, N.H.	1939-1951
<i>James M. Tunnell</i>	Georgetown, Del.	1941-1947
<i>Millard E. Tydings</i>	Hyvra de Grace, Md.	1927-1951
<i>Arthur H. Vandenberg</i>	Grand Rapids, Mich.	1928-1947
<i>Robert F. Wagner</i>	New York City	1927-1951
<i>David I. Walsh</i>	Clinton, Mass.	1926-1947
<i>Burton K. Wheeler</i>	Butte, Mont.	1923-1947
<i>Kenneth S. Wherry</i>	Pawnee City, Nebr.	1943-1949
<i>Wallace H. White, Jr.</i>	Auburn, Maine	1931-1949
<i>Alexander Wiley</i>	Chippewa Falls, Wis.	1939-1951
<i>Raymond E. Willis</i>	Angola, Ind.	1941-1947
<i>George A. Wilson</i>	Des Moines, Iowa	1943-1949
<i>Milton B. Young</i>	Berlin, N.Dak.	1945-1951

* Appointed by the governor.

SHIPBUILDING IN U.S. The greatest shipbuilding program ever attempted in world's history was being completed in the United States during 1945. More than any other one thing, ships and still more ships won Global World War II. Without ships—merchant ships more than naval, strange as it may seem—the war in both hemispheres would have been lost by the United Nations to the Axis.

The emergency program for Liberty type ships was concluded Oct. 30, with the delivery of the 2,710th vessel, the S.S. *Albert M. Boe* by the New England Shipbuilding Corporation. The first Liberty ship to be constructed was the S.S. *Patrick Henry*, launched from the Bethlehem-Fairfield Shipyard of the Bethlehem Steel Company in Baltimore, Maryland, Sept. 27, 1941.

From the S.S. *United Victory*, pioneer of the merchant vessels of this type, delivered Feb. 29, 1944, by the Portland yard of the Oregon Shipbuilding Corporation, until the last of the type, the S.S. *Brainerd Victory*, delivered by the same yard Nov. 23, 1945, merchant shipyards turned out 531 Victory ships.

The first T2-SE-AL type tanker was the *ESSO Gettysburg* delivered by the Sun Shipbuilding and Dry Dock Company, Chester, Pennsylvania, Feb. 28, 1942. From the first T-2 tanker until the delivery of the *MacGregill* from the same yard on Nov. 30, 1945, there were 525 tankers of the T2-SE-AL type or modifications built under the U. S. Maritime Commission program.

From Jan. 1, 1942 through November, 1945 there were 5,573 merchant ships of 54,002,123 deadweight tons delivered from all American shipyards.

Contracts for 434 merchant ships remained on Maritime Commission books after cancellation of \$425,000,000 in contracts for 135 ships, and three contracts for special military equipment.

The contracts cancelled covered 35 coastal cargo ships of the C1-M-AV1 type, 42 Victory cargo ships, 24 coastal tankers for Lend-Lease to Great Britain, 4 Liberty cargo ships that were being converted to aircraft repair ships, 8 military type Victory ships, 8 tankers, 5 military transports of the C4 type, 6 refrigerator ships and 3 of the P2 type.

The outstanding contracts, covering virtually all types from small coastal freighters to P-2 passenger-cargo ships, extend into 1946. With the completion of these contracts, the wartime ship construction program will be ended. In the future contracts will be awarded only for ships needed for postwar trade routes. These contracts will be let through competitive bidding, instead of the wartime speed-up procedure of cost-plus.

Reflecting the favorable war aspect at the end of April, 1945, President Truman recommended a cut of more than \$7,000,000,000 in appropriations (\$3,100,000,000) and contract authorizations (\$4,265,000,000) for the Maritime Commission's ship construction program. The Federal Government has built and now owns shipyard facilities costing approximately 2.3 billion dollars, and private shipbuilders have invested additional huge amounts. The wartime investment of the Federal Government is more than four times the total government and private investment in shipyard facilities prior to the war.

Shipyards, however, do not comprise the whole shipbuilding industry. They are the establishments which perform the final assembly, repair, and outfitting of both merchant and fighting vessels. In some instances they also manufacture components and develop design.

The broader industry of shipbuilding in the United States encompasses the manufacture of parts and material throughout the country, as well as the work of designing ships and the assembly and repair of ships in the yards. Every State in the Union contributes something to the building.

At peak wartime activity the entire shipbuilding industry employed an estimated 4,000,000 workers. The manufacturers of the wide variety of materials and components which go into the finished ships are spread throughout the country and employed at the peak of wartime activity an estimated 2,300,000 workers. With the shipyards of the United States located on the shores of the more important rivers, on the Great Lakes, the Gulf Coast and on the Atlantic and Pacific seacoasts, they constitute the greatest concentrations of the nation's shipbuilding activities, and employed the largest single group out of the millions of workers engaged in the shipbuilding industry, having 1,720,000 employees at the peak.

The United States now has a shipyard capacity far greater than it can conceivably use in times of

peace. Since the middle of the nineteenth century this country has not been a leader in shipbuilding. In the last fifty years it has been the world's leading shipbuilder only in the World Wars I and II. During most peacetime years between the two World Wars England led the world in the production of merchant tonnage. In fact, in many years Germany and Japan each built and launched a greater tonnage of merchant ships than did the United States. In the 18-year period between 1920 and 1939 the United States built less than 10 per cent of the total merchant ship tonnage launched in the world.

Rear Admiral Edward L. Cochrane, U.S.N., Chief of the Bureau of Ships of the Navy Department, has given a Navy appraisal of the shipbuilding industry from which the following portions are quoted:

"The fall of 1940 wasn't pleasant to contemplate. British shipbuilding was in jeopardy of capture, as was the British Fleet. Without exception, the important shipbuilding centers of Western Europe were in enemy hands. We needed ships, both fighting and merchant ships. We needed them badly.

"The initial responsibility of saving the world civilization from the bleak disaster staring it in the face was placed squarely upon the shipbuilding industry of the United States and its allied marine industries. . . .

"Our privately owned shipyards have earned the right to be kept in being in peacetime. . . . If we have learned anything from this war, it is that we must never again destroy any facility or special skills that will guarantee us the physical and economic security that future generations have a right to expect as their heritage. . . .

"The survival of American shipbuilding is an essential of national importance second to none."

The production of large merchant types of seagoing vessels over 2,000 gross tons by American shipyards during 1945, while commendable, cannot compare with the tremendous amount of construction during the last six months of 1943, when the peak was reached. However, during the first half of 1945 more than three ships a day were finished.

Prospects for new shipbuilding in the future on a more normal basis are fair. A number of designs have been prepared contemplating the construction of special types of vessels to replace the many that were lost during the war, or radically converted for military use.

October 25, 1944, might have been an important day for the American Merchant Marine, for President Roosevelt requested the Maritime Commission to prepare a "bold and daring" plan for its improvement and to maintain its future position. The President stated emphatically we should lose no time in preparing designs for and constructing such vessels. He urged "immediate inauguration of the program so that this plan could be a factor in employment and the conversion from war to peacetime economy."

The year 1945 passed through eleven and one-half months before this "bold and daring" plan by the Maritime Commission was brought to light before the annual meeting of The Society of Naval Architects and Marine Engineers in New York. It was not so "bold and daring," after all, and instead went back to the early 1920's, right after World War I, in North Atlantic passenger ship design. It went so far as to predict that "ultimately, it is believed that the water transportation of passengers will be so decreased as to become rather a minor factor outside the 'cruise' for relaxation and recreation."

Then this study made under The President's directive demanding "a departure from precedent" proclaimed that "the period of usefulness for such ships should extend through a couple of decades."

The year may take just pride in the fact that on March 1, at exactly 10:16 o'clock in the morning Pacific Coast time, the keel was laid for the first vessel to be built for a foreign power in the United States in more than twenty-two years. This historic keel was for the first of twenty cargo ships costing approximately \$8,000,000 ordered from the Albina Engine and Machine Works, Portland, Oregon, by The Netherlands East Indies Government. This contract, the first big peacetime order for foreign ships, was an announcement that Portland, Oregon, can compete with the world in shipbuilding, and the enterprising shipbuilder and designer is the Pacific Coast industrialist, L. R. Hussa, who was building ships way back when Henry J. Kaiser was building highway roads in our Northwest. Hussa is continuing to build ships, without benefit of Federal Government financing.

March witnessed the launching of the first 45,000-ton carrier to be built for the United States Navy, the U.S.S. *Midway*, in the Dravo-created Submerged Shipway at the Newport News Shipbuilding and Dry Dock Company's yard, Newport News, Virginia. This giant graving dock, a Navy secret since it was built in 1941, may be put down as an outstanding development in shipbuilding for 1945. When the great battleship U.S.S. *Washington* was launched on June 1, 1941, some 25,000 persons witnessed the ceremony. If these spectators had paid \$10.00 each for the privilege, as theatergoers did in principal cities from Coast-to-Coast to see and hear the great Spanish "Duse of Song," Señora Raquel Meller in 1926, the receipts would barely have covered the actual expense of preparing the launching berth for the thrilling moment when the mighty hull slid down the inclined ways. The sum of about \$250,000 is required for the necessary blocking, cradles, greasing, and other expenses incidental to preparing a ship of battleship size for launching on inclined ways.

This actual launching expense is only one of a number of shipbuilding costs which are eliminated or substantially reduced when a horizontal shipway is used instead of inclined ways for ship construction, and the completed vessel is floated, rather than launched.

When the Newport News Shipbuilding and Dry Dock Company, noted for its superior skill in building fine ships, and for its outstanding ability in devising new techniques in the art of shipbuilding, was called upon by the United States Navy to build the largest types of aircraft carriers, it had to formulate plans for constructing new facilities. The courage of the Newport News management in adopting a new and unique type of horizontal shipway for launching by floating, as proposed by Dravo Corporation, successfully culminated in the construction of the new shipways at a cost one-third as great as the conventional massive concrete graving docks of similar size. With such horizontal shipbuilding basins a ship may be launched or a hull put back in service by a simple operation of turning a valve which floods the basin. With a horizontal shipway a yard is always ready to build new ships or to repair or modernize existing hulls.

The beginning of 1945 witnessed the commissioning and operation of the first of four ice breakers of the "Wind" class, bringing to the U. S. Coast Guard fleet an unusual and useful type of vessel. A bow propeller driven by a 3300 h.p. electric motor creates a wave ahead of the vessel

that helps break the ice. A "V" in the stern simplifies pushing when the going gets tough. Water-tight bulkheads separate engine rooms so flooding can knock out only one at a time. Six Diesel-driven generators supply power to two stern and one forward propellers.

One unique feature of these vessels is the installation of a propeller in the bow in addition to the stern propellers. The bow propeller is for ice-breaking purposes only.

Mention might be made of the possibility of the reversible propeller. While variable pitch or feathering propellers are not new, developments along new designs are being brought forth, largely because of their feasibility with machinery not readily reversible.

A notable step was taken in the development of the gas turbine. While it still may be considered in the experimental stage, it has been the subject of a great deal of investigation and probably will soon be put into practical application. Its possibilities are surprising.

No radical changes in hull designs or particular advancements that have not previously been mentioned have been brought out. Progress along these lines is of necessity slow.

WENDELL PHILLIPS DODGE.

SHIPPING. Science and engineering as applied to shipping reached their all-time pinnacle in 1945. Aside from providing the weapons to win the greatest of wars in world's history, the power which opened the atomic age was loosed and both sea and air navigation developed to a point insuring greater safety.

Radar, the very mention of which because of wartime necessity was soft-pedaled until V-J day and taboo to the extent almost of high treason, is going to make sea and air navigation entirely continuous and foolproof, regardless of night or weather. This "electronic navigator" can detect through darkness, fog and storm the position of any above-water obstacles, such as icebergs, other ships and land, buoys and lighthouses, at distances up to thirty miles, depending upon the size and shape of the object.

The basis of the "electronic navigator," or radar used at sea is a rotating antenna located on the top deck of the ship and analogous to a searchlight, in that it sends out beams to locate obstacles in the ship's path. The difference, however, is that beams from the radar antenna, which are actually powerful radio microwaves, are capable of penetrating fog or any other atmospheric conditions without hindrance. Moreover, they are sent out as "pulses" or surges of extremely short duration and at a very rapid rate.

The United States Navy gave radar the hardest work-out test possible or even conceivable in The Aleutians, "Cradle of Storms." Here the Pacific Ocean with its warm Japan current coming in contact with the cold Arctic current flowing through the Bering Sea rapidly condenses, at different temperatures, causing masses of air to be constantly sucked through an 1,800-mile arc of high mountains and narrow passes of the volcanic rift of the Alaska Peninsula, reaching storm intensity quickly.

And radar has helped immeasurably to guide our commercial ships and airplanes through fogs and storms. Consider, for instance, that in 1943 more than 4,000,000 tons of cargo space were lost on the Great Lakes alone as the result of fog.

Early in the war it was realized that an accurate and reliable navigational aid was essential to ensure coordination to prevent needless loss of ships,

aircraft, and the crews aboard as a result of enemy action. As a result of intensive research and development, Loran was born. This system has long been one of the Coast Guard and Navy's carefully guarded war secrets because it was used primarily by navigators who were in action against the enemy, both in Europe and Asia. However, Loran is of equally great importance as a peacetime aid to navigation.

Work was commenced on Loran in 1941 and by the end of 1942, the first of the ground stations which were later to lace the world with the electronic lines of position were operating. First stations were set up in the North Atlantic area by the U. S. Navy in cooperation with the National Defense Research Council, and were eventually taken over completely by the Coast Guard.

The North Atlantic chain was established in mid-winter of 1942, during the Battle of the Atlantic, and the Aleutian chain, later in the same year and in the spring of 1943. The intensity of weather and the rough terrain made the establishment of these stations a hazardous operation. Electronic experts of the Coast Guard aided in the construction. Loran stations were later set up and operated in the Pacific area. Thus, service is now afforded navigation along both coasts of North America, along the busy Great Circle courses of the North Atlantic and North Pacific, and in the central and southwest Pacific, where pin-point navigation is essential.

Loran provides quickly and accurately, in any type of weather, data which enable the navigator to establish his position in a matter of a few minutes. There are, at present, no other navigational aids which will give the navigator the same consistent fixes relative to transmitting units under all conditions. The more common direction finding systems, even after 25 years of service, cannot offer such dependability because of certain inherent factors in the propagation of radio waves which limit their capabilities.

Loran is inherently a good system because only the dependable and stable factors of radio wave transmissions are utilized. There is no dependence placed on the apparent direction from which the signal approaches as in ordinary direction finder equipment. Direction indication in radio is subject to error when the wave travels over land masses or there is interference from sky waves. The velocity of an electromagnetic wave is considered constant for all practical purposes, there being only minute variations in the air. This is important because the time of travel may be measured accurately and so the distance may be exactly determined.

Heretofore, it has been usually considered unnecessary to have accurate positions while great distances from land. Because of the war, accurate fixes became necessary to enable convoys and air cover to rendezvous quickly and accurately. Another wartime use, and equally important peacetime employment, has been the location of ships and planes in distress. By giving Loran coordinates rather than geographical ones, craft in distress may be located much more easily because it becomes unnecessary for the navigator to compute drifts, sea currents, winds, etc. The searching craft simply sets the course on his receiver which keeps him on the Loran line of position of the craft in need of assistance.

Loran operates on a new principle, using pulsed transmission so that time differences can be accurately measured. Briefly, the theory of operation is as follows: It is known that an electrical wave travels about one nautical mile every 6.185 mil-

lionths of a second. Using this as a basis of computation it may be seen that if the amount of time required for an electromagnetic wave to travel from the transmitter on shore to the receiver aboard a ship, then the distance the wave has traveled may be readily computed.

The present Loran has a daytime range of from 600 to 800 miles. However, at night when transmitting conditions are good and the ionosphere may be utilized to reflect radio waves, the effective range increases to 1,400 or 1,500 miles. The use of the reflected waves at night requires some skill at matching the signals, but with a little practice an operator can master the technique. The accuracy may be eventually increased to one or two miles at 1,000 miles from the station. The service area of the present standard Loran is only 1,000,000 square miles for a chain of three stations (two rates) but this will be increased to about 5,000,000 square miles when the new Loran is ready for use. To get good coverage over all the important sea lanes of the world would require only about seventy stations.

There is only one factor which seriously affects Loran compared to the many for all other systems. This is that of serious electrical disturbances. These include electrical storms, variation in elevation of the E and F layers, and the general random noise always present which sometimes increases in intensity because of precipitation. However, these atmospheric disturbances must be quite serious before Loran becomes unusable.

This world-wide installation has assumed international aspects both as to location, operation, and maintenance. The system is now operated by three major nations and is available to any vessel properly equipped regardless of the flag it flies. The international aspect may expedite the standardization of maritime procedure where communications and navigational equipment is concerned. At the present time, the U. S. Coast Guard is responsible for the operation and maintenance of most U. S. stations, but all funds necessary have not yet been provided to carry on this duty as a peacetime responsibility. Whether the existing installations will be maintained, reduced, or additional stations installed, is a question of the future depending not only upon national decisions, but also international agreements.

Besides its dubious prophecies concerning the future of ship passenger travel as compared with planes, the U. S. Maritime Commission made this official analysis of the North Atlantic trade route, always the heaviest in the world:

"Route (A), while classed as 'essential' and while the scene of the most spectacular ship operation of the century just past, is highly competitive and probably cannot offer to American interests the opportunities in future passenger transport development offered elsewhere."

According to the poll conducted from a cross section of the American people by the Shipbuilders Council of America, England and the Channel ports will be the favored destination of 21.57 per cent of the prospective travelers who revealed their plans; 11.18 for Mediterranean ports; 5.63 for Baltic ports; 12.99 for the East coast of South America; 9.07 for the West coast of South America; 8 to the Far East and Australia; 7.47 from East to West coasts of the United States, or vice versa, via the Panama Canal; 11.31 to Hawaii and other Pacific islands; 10.91 to Cuba and the Caribbean; 1.87 to other ports.

The astonishing thing is that at long last, 65.14 per cent of those asked will travel on American

ships by preference, while 12.54 will choose foreign ships.

There are many indications of a pent-up desire for foreign travel, the survey indicated. Before this war, only about .0592 per cent of Americans went abroad annually.

Throughout most of 1945, virtually all American shipping was in the hands of the Government, our ship operators merely running vessels for the War Shipping Administration. On June 30, 1945, world merchant shipping totaled 69,335,000 gross tons (compared with 60,607,000 gross tons, June 30, 1939), of the foregoing 1945 total the United States merchant shipping represented 36,213,000 tons (8,672,000 in 1939), the British Empire 15,826,000 tons (18,833,000 in 1939), Norway 2,813,000 tons (4,553,000 in 1939), Netherlands 1,576,000 tons (2,728,000 in 1939), Japan 1,526,000 tons (5,255,627 in 1939).

As a first step toward getting American private ship operation under way, the end of December brought forth Maritime Commission plans to provide interim passenger service in the Pacific through the conversion of two P2-S2-R2 type transport vessels for passenger use. Originally completed as troop carriers assigned to the Navy, the vessels will have completed present assignments to troop movement early in 1946.

Combination passenger-cargo ships carrying fifty-two passengers and a crew of seventy-six, with passenger accommodations and public rooms air-conditioned throughout, as are the crew mess-room and recreation quarters, provide the first application featuring such passenger accommodations in the Latin American trade.

In order to hold our share of postwar ocean passenger traffic we must plan for attractive accommodations and the finest possible service on our passenger liners. Accordingly, there are under construction by the Federal Shipbuilding & Dry Dock Corporation for the United States Lines, U.S. Maritime Commission P2-S2-R4 twin screw passenger vessels; the Commission's C3-S1-BR1 single screw turbine propulsion passenger and cargo vessels, being constructed by the Ingalls Shipbuilding Corporation for the Mississippi Shipping Company; the "Exceller" type cargo vessels being built by the Bath Iron Works Corporation for the American Export Lines; the Maritime Commission's R2-ST-AV1 vessels being built by the Gulf Shipbuilding Corporation for the United Fruit Company; and the C1-B cargo ships built by the Bethlehem Steel Company.

WENDELL PHILLIPS DODGE.

SHOOTING. The heavy firing of 1945 was confined to theaters of war and our crack marksmen had little time to engage in tournament competition. The only major event held was the traditional Grand American at Vandalia, Ohio, where Don Englebury of Vermilion, Ohio, and Mrs. Van Marker of Evanston, Ill., won handicap honors in their respective groups.

Miss Ruth Knuth, pretty Indianapolis brunette, and Lieut. Vic Reinders of Laredo, Texas, led in the "champion of champions" tests. Other major victors were Rudy Etchen, Memphis; A. F. Jones, Thief River Falls, Minn.; Mrs. Isaac Andrews, Spartanburg, S. C.; Mrs. Lela Hall, East Lynne, Mo., and E. T. Pugh, Morris, Ill.

THOMAS V. HANEY.

SIAM. A constitutional monarchy in southeastern Asia; occupied by Japanese armed forces from December, 1941, until the surrender of Japan in

September 1945. The national name, Siam, was restored by the Government in 1945 in place of Thailand which had been the designation of the country from 1939 to 1945. To the natives the country retains the name, Muang Thai (Land of the Free). Ruler: King Ananda Mahidol (born Sept. 20, 1925), proclaimed King on Mar. 2, 1935, following the abdication of his uncle, Prajadhipok (died May 31, 1941).

Area and Population. Siam's area amounts to 200,148 square miles. The estimated population on Mar. 31, 1940, was 15,718,000. Chief cities: Bangkok (capital) 750,000 inhabitants in prewar times, Chiangmai 544,000, Ayuthia 300,000. Nine-tenths of the people are Siamese. In December, 1941, there were 500,000 Chinese, 500,000 Indians and Malays, 60,000 Cambodians, and some 2,000 Europeans resident in the country.

Education and Religion. There is free and compulsory primary education, but only about 35 per cent of the adult population are literate. As of Mar. 31, 1939, there were 12,809 government, local public, and municipal schools, with a total of 1,567,745 pupils. Bangkok has two state-controlled universities. The religious composition of the population in 1937 was: Buddhists, 13,752,091; Mohammedans, 626,907; Christians, 69,227; others, 15,880.

Production. Over four-fifths of the working population is engaged in agriculture and fishing. The chief crop is rice, which is both the main article of diet and the principal export. Production in 1940-41, 4,923,350 tons of cleaned rice. Other leading crops are tobacco, coconuts, pepper, and cotton. Rubber and tin ore are the most important products after rice. Livestock (1938): 5,711,720 bullocks, 5,551,232 buffaloes, 385,565 horses, and 10,970 elephants. Tungsten, gold, silver, coal, lead, antimony, copper, rubies, and sapphires are produced. Teak lumbering is an important industry. Manufacturing is largely restricted to lumber and rice milling.

Foreign Trade. For the year ended Mar. 31, 1941, merchandise imports were valued at 163,400,000 bahts (128,200,000 in 1939-40); exports, 257,600,000 bahts (208,700,000). Values of the chief 1940-41 exports were (in millions of bahts): rice, 142.8; tin ore, 48.4; rubber, 39.3; teak wood, 5.9. Rice exports totaled 1,625,400 metric tons; rubber, 43,700 metric tons.

Finance. The budget was changed to the Christian calendar year basis beginning Jan. 1, 1941. Ordinary budget estimates for 1942 placed receipts at 210,000,000 bahts and expenditures at 259,000,000; in 1941 they balanced at 138,000,000 bahts. There was a treasury reserve estimated at 31,857,465 bahts on Jan. 1, 1942. Public debt on Sept. 30, 1941, totaled 81 million bahts (internal 26.2 million bahts; external 54.8 million bahts). The baht exchanged at an average of \$0.3515 in 1940.

Transportation. At the time of the Japanese invasion, Siam had about 2,048 miles of railway line, 5,574 miles of highways, and state-controlled airlines linking the principal cities. Air connections with Japan were opened in 1942. During 1939-40 a total of 960 vessels of 1,425,989 tons entered the port of Bangkok.

Government. The constitution of Dec. 10, 1932, transformed Siam from an absolute into a limited monarchy. Nominally the King exercises executive power through a State Council (Cabinet) and legislative power through an Assembly of 182 members, to which the State Council is responsible. Half the members of the Assembly were elected by popular vote and half nominated by the Crown. For developments in 1945, see below.

Events, 1945. The sudden capitulation of Japan precipitated Thailand's most serious national crisis involving the political and economic independence of the country.

Since Thailand, three days following Pearl Harbor, signed a military alliance with the Axis Powers and declared war on Great Britain and the United States, the United Nations, particularly Great Britain, have been inclined to treat Thailand as an enemy state. The Thai official who was responsible for the war declaration was Luang Pibul Songgram, Premier and Minister of Defense, who became Japan's chief quisling in Southeastern Asia. Despite the fact that there was strong opposition to his action, Songgram with Japanese military backing quickly made himself dictator and his country totalitarian.

The United States did not declare war on Siam as did Great Britain shortly following Songgram's action, hence Washington was inclined to take a more conciliatory course toward Thailand than was Great Britain. According to authoritative reports from Thailand at the time, Premier Songgram, who had long been in secret contact with the Japanese, only waited five hours before inviting the Japanese Army, which was already in French Indo-China, to enter Thailand.

U. S. Advised. According to M. E. Denning, chief political adviser to Admiral Lord Louis Mountbatten, who conducted the negotiations (December, 1945) with Thailand's new premier, M. R. Seni Pramoj, (former Siamese Minister in Washington, who replaced Songgram following Japan's capitulation), the United States was not formally participating in the negotiations. However, the U. S. representative at Bangkok, Charles Yost, was being kept informed. Denning said that both Indian and Australian delegates were also participating in the discussion.

In a statement concerning the negotiations at Singapore on Dec. 14, 1945, Mr. Denning recalled that Great Britain and Siam signed on Siam's request, a non-aggression pact in 1940, but despite this Siam only put up token resistance to the Japanese and did not ask Britain for help against the Japanese invaders.

Siam, according to Mr. Denning, decided to "take the easy course" and despite her non-aggression pact, declared war against both Britain and the United States. In addition Thailand accepted as a "gift" from Japan, four states in northern Malaya and two Shan states in Burma and still further territory from French Indo-China. In addition the Siamese puppet government "acquiesced" in Japan's action toward British nationals and their property in Siam. Furthermore, the Siamese puppets raised no objections to Japan's inhuman treatment of some 60,000 Allied war prisoners who were subjected to inhuman treatment while forced to work on a Japanese railway project in the Siam-Burma jungles.

Mr. Denning expressed the opinion that Siam must be held responsible for her actions, despite the fact that the government had since declared the previous war action as "illegal and void" in the latter stages of the war. Mr. Denning regarded the action as a "novel procedure" in international law and if allowed to stand would permit any nation declaring war to escape the consequences when it found itself on the wrong side.

Mr. Denning paid a high tribute to the resistance movement which was organized in Siam by Lieut. Col. Nicol Smith, commander of the U. S. Order of Strategic Services (O.S.S.), but

said that it did not have an opportunity to make a more effective contribution because of the sudden ending of the war. Mr. Denning admitted that the Thai leaders were now "fed up" with the Japanese but he was not entirely convinced regarding their sincerity.

Aside from Mr. Denning's statement, attention was also called to the action of the Thailand Government several months before Pearl Harbor in entering into a secret pact with Japan whereby Japan contracted to construct a modern fleet for Siam, and according to the agreement Japan was to have exclusive charge of naval training and war ship construction for Siam over a long period of years.

Appeal for Moderation. Dr. E. C. Cort, an American physician who spent many years in medical service in Siam, referred in a letter to the New York *Herald-Tribune* to America's long friendly relations with Siam and urged that the United States should take steps to prevent any action by Great Britain which would prejudice the future political and economic independence of the country as a result of the treaty negotiations. Dr. Cort referred to the services rendered to Siam by a long list of American political advisers, including Strobel, Westengard, Sayre, James, Stevens, Dolbeare, Pendleton and others.

According to a dispatch in the New York *Herald-Tribune* by A. T. Steele, its correspondent in the Far East, the following demands on Siam were included in the British proposals for ending the state of war between the United Nations and Siam:

1. Siam is to remain under British rule until accepted into the United Nations.
2. Siamese territory not already controlled by the Allied Military Authority (A.M.A.) must comply with British requests in all matters of civil administration.
3. The British will hold control over all Siamese banks, business, foreign exchange, and commercial and financial transactions until the conclusion of all financial and economic matters arising from the Japanese war.
4. Exports and trade in rice, tin, rubber, and teak will be prohibited until world scarcities of these products end.
5. All rice surpluses will be made available to Britain until the end of the world shortage.
6. All Siamese ports and traffic facilities will be placed at the disposal of the A. M. A.
7. British will censor the press and control radio, telephone, telegraph and all forms of intercommunications.
8. Seized British properties must be turned back and, pending negotiations of a new commerce and navigation treaty, Siam must not enforce measures excluding British commercial, industrial, and professional interests.
9. Siam will be bound to any multilateral treaties made by Great Britain prior to December 7, 1941, whether or not Siam originally was a party to the agreements.

Presented with Bill. The Siamese are being asked to pay expenses of the A. M. A. in Siam—approximately 100,000 baht (\$40,000) a day. The new demands also include 1,500,000 tons of rice. Original demands accepted Siam's gift of approximately one-sixth that amount to the United Nations.

Britain also demanded the right to negotiate a territorial treaty with France on behalf of Siam and demanded that India be given a voice in drawing up the final treaty.

British diplomatic circles in Washington said the U. S. Government was being kept informed regarding the course of the negotiations and nothing would be done to prejudice the political or economical independence of the country or to infringe the "Open Door" for trade between Siam and other countries in the future. Washington reported the United States was particularly concerned regarding Siam's future trade in rice, rubber, tin and hard wood.

Problem of Rice Exports. According to A. T. Steele's report, Great Britain demanded between 1,000,000 and 1,500,000 tons of Siamese rice as an indemnity for property losses suffered by British interests in Siam as a result of the Japanese occupation.

In reply to this and the further charge that Britain demanded control of Siam's foreign commerce, the British stated that their proposals relate only to goods in which there is a world shortage and that in such instances the control would be through an inter-allied mechanism. With reference to other charges the British stated that no part of Siam has been or will be under British or Allied Military Authority (A. M. A.), but that territories previously belonging to British Malaya and Burma which were turned over to Siam by the Japanese, must be returned to the original authorities. The Siamese are resisting this demand on the ground that the territories previously belonged to Siam (particularly portions of French Indo-China) but were seized by the French in 1904. However, the Siamese have aroused little support for their claims as they hailed the acquisition of new territory as part of the victory for their participation in the Japanese "East Asia Co-Prosperity League."

The last diplomatic move in the case of Siam in 1945 was a statement by Dean Acheson, Acting Secretary of State, on Dec. 19 that the United States had "intervened" in the negotiations between Great Britain and Thailand. Acheson requested both sides not to conclude a final agreement until American discussions with Great Britain were concluded. According to the report Dean Acheson expressed special concern regarding alleged efforts of Great Britain to control Siam's exports of surplus rice and to use rice exports as reparations.

The British argued that since Siam is the only "rice surplus" country in Southeastern Asia, that Siam should be compelled to supply rice to other countries as reparations for losses that Siam had caused neighboring states through participation in the war on the side of Japan. The British stuck to their original demand that Siam must give restitution to peoples who had been harmed by Siam's failure to resist Japanese aggression, and the role she had played as a Japanese "puppet." Since the State Department was unable to induce the British to forego their demand for "restitution," Dean Acheson said he was trying to scale down the quantity of rice to an amount "not exceeding 800,000 tons." The British stated they would be willing to "cushion" the deal by advancing a loan to the Siamese Government. The Siamese Prime Minister Mom Rajawong Seni Pramoj, was quoted in a dispatch from Bombay on December 19 as stating that he was prepared to sign the agreement "shortly."

Anglo-Siam Treaty Signed. It was announced on January 1, 1946, that an Anglo-Siamese agreement, officially ending the state of war with Thailand, had been signed by representatives of the United Kingdom, the Government of India and the Kingdom of Siam. A further agreement between Siam and Australia was scheduled for signature shortly.

Under the treaty Siam pledged herself to participate in regional security arrangements in Southeastern Asia and the Southwest Pacific under the United Nations Charter. The treaty was signed on behalf of Siam by Prince Viwat Anajai Jayiyant and Prince Viwatchai Chaiyang, and on behalf of Great Britain by M. E. Denning, political adviser to Admiral Lord Louis Mountbatten, by M. E. Aney for India.

Under Article I Siam agrees to return to Great Britain all territories seized after Dec. 7, 1941, and to rescind all legislative acts concerned with their annexation. Also to make compensation for all losses occasioned British subjects by the annexations.

Under Article III Siam assumes responsibility for safeguarding, maintaining and restoring unimpaired all British property throughout Siam. British business concerns and banks are permitted to resume operations. Siam agrees to pay arrears of interest on all loans since the date of default, to restore import and export trade with neighboring British territories, and to negotiate new commercial treaties.

Kra Canal Prohibited. Article VII gives definite assurance that Siam will not construct any canal across the Isthmus of Kra, linking the Gulf of Siam with the Indian Ocean, "without the prior consent of the United Kingdom." The Japanese had long planned to build the canal in order to shorten the distance to India by some 1,500 miles.

Siam agrees to restore the validity of all treaties which were abrogated by her declaration of war against the Allies on Jan. 25, 1942.

Siam agrees to participate in any general international agreement regarding tin and rubber which may be decided by the United Nations or its Economic and Security Council.

Siam promises to make available to Great Britain 1,500,000 tons of surplus rice for export to adjacent rice-consuming countries. The amount of rice exported is to be adjusted in accordance with the excess above domestic requirements.

Siam agrees to restore all prewar agreements concerning navigation and air services.

Prior to a date not later than Sept. 1, 1947, Siam undertakes not to export rice, tin, rubber and tea except in accordance with the recommendations of the appropriate boards of control of the United Nations Organization.

Great Britain and India agree to sponsor Siam's application for membership in the United Nations.

The United States had originally raised objection to the treaty on the ground it was "too severe," and would infringe on Siam's independence, but the objection was later withdrawn. Since the United States did not declare war on Siam, it repeatedly interceded on its behalf during the war, and maintained a counter-espionage organization against Japan within the country. It was reported that the United States would shortly extend recognition to the new Siamese Government of Prince Seni Pramoj.

JOHN B. POWELL.

SILVER. With mine production slackening, the story of silver was wound up in government actions which profoundly affected commerce and consumption of the metal. War Production Board on May 26 removed restrictions on the use of domestic silver through amendment of its order M-199, and on Aug. 20 revoked the order, thereby ending all use and distribution controls. With booming demand

from manufacturers, and import restrictions over, the Office of Price Administration raised the ceiling price of foreign silver from 45 cents per fine troy oz. to 71.111 cents, bringing it to parity with the domestic silver price.

These actions precipitated renewed controversy between (1) legislative representatives of the silver producing States, who would like to see the Treasury buy silver at its full monetary value (\$1.29 an oz.), and (2) those espousing the cause of industrial users who wish to keep the price at the 71.111 cent level. In the tussle the Green Act, which, as renewed since July 12, 1943, has provided that surplus Treasury silver could be released for war purposes and civilian production at the lower price, was allowed to expire Dec. 31.

Compared with more than 1,200 million oz. of surplus "free" silver (not backing currency in circulation) when the act first went into effect, the treasury in Dec., 1945, held only 403 million oz. Monetization of 158 million oz. of this remainder has been authorized. The treasury sold 139,000,000 oz. of "free" silver for industrial use through Nov. 30, compared to 46,200,000 oz. in all of 1944, and 20,800,000 oz. in 1943 after the Green Act became effective.

Consumption of silver in the United States for non-monetary purposes reached an estimated 150,000,000 oz. (1944: 125,000,000 oz.), reflecting a demand which brought the market price of foreign silver immediately to the new ceiling in September. Because silver is mined principally in conjunction with the base metals and gold, whose production dropped, only 28,847,812 oz. came from domestic mines. Output of other Western Hemisphere countries also dropped, Mexico producing 60,000,000 oz. (1944: 63,000,000 oz.); Peru, 11,500,000 (1944: 11,700,000); and Canada, 14,000,000 (1944: 14,700,000).

C. T. Post.

SKATING. When the season ended last year, this hemisphere's most glittering figure-skating crown rested on the pretty head of 16-year-old Barbara Ann Scott, who, after successfully defending her Canadian senior women's title, visited New York and captured the North American laurels at Madison Square Garden.

Combining the North American and national championships for the first time, officials produced a gala event on the Garden ice. Miss Gretchen Merrill, blonde miss from Boston, carried off U. S. senior honors for the fifth time in eight years of competition, but had to be content with second place behind Ottawa's Miss Scott in the North American finals.

National junior laurels went to Miss Eileen Seigh, 16, a rising star from Brooklyn. Other U. S. title winners included J. P. Brunet and Miss Donna Pospisil, New York, senior pairs; Robert Swenning and Mrs. K. M. Williams, New York, senior dance, and Lieut. Comdr. Lyman Wakefield and Miss Betty Higgins, Boston, junior pairs. The men's individual events were canceled because of the war.

Many former champions and newcomers joined casts of the popular professional shows and the Ice Follies, Hollywood Revue and Ice Capades continued to draw packed houses in their cross-country tours.

Honors in speed skating were quite divided, travel restrictions preventing any big meets that might have brought together the top stars. Herman Van Putten of Paterson, N. J., and Miss Marion Hanley of Staten Island shone in races along the eastern seaboard, Van Putten's major triumphs

coming in the Middle Atlantic and New York State championships. Listed among Miss Hanley's many titles were two captured in the same meets. U. S. men won most of the laurels in the Manitoba title tests at Winnipeg, Don Johnson of Minneapolis taking the senior division crown.

Two national marks of long standing fell at Minneapolis in January. Bobby Fitzgerald streaked through the senior men's 880 in 1:14.2 to clip a full second off the record set by Clas Thunberg of Finland at Lake Placid in 1926 and Miss Betty Fahlin skated the women's 440 in 0:41.7 to better the standard of 42 seconds set by Miss Betty Knapp at Lake Placid in 1940.

THOMAS V. HANEY.

SKIING. Travel restrictions and the absence of many top-flight skiers serving with the armed forces held this sport in check last season. Competition was more or less localized.

Few championships were held and probably the most important of the year was the annual Alta Cup meet at Salt Lake City, where Pfc. Barney McLean captured the slalom and meet titles and Miss Barbara Kidder, Denver coed, led the women's field. Charles Blum of New York annexed the downhill test for his second big triumph of the season, the 22-year-old ace having scored before 8,000 in an invitation race at Bear Mountain earlier in the campaign.

Consistent scorers in college and invitation meets included Dick Gaylord, whose Middlebury team was outstanding in intercollegiate competition; Joe Jones, Middlebury; Francis Drury, Dartmouth; Howie Hewitt, Dartmouth; Vernon Lamb, Dartmouth; Merrill Barber, Brattleboro Outing Club; Elliott Lang, Andover, Me., and Larry Ambrose, Vermont.

Miss Margaret Burden of Westmount, P.Q., captured the downhill contest in the women's international races at Pico Peak and placed fourth to Miss Ann Volkmann of Concord, Mass., who won the slalom. Miss Rhona Wurtele of Montreal, who set a new downhill course record at Montreal; Miss Rebecca Fraser, Middlebury, and Miss Barbara Shaw, Stowe, Vt., were other stars in women's events during the season.

THOMAS V. HANEY.

SLOAN FOUNDATION, The Alfred P. Incorporated in 1936, the Foundation aids accredited schools and colleges in developing new "patterns" in economic education. On Dec. 31, 1944, its capital assets were valued at \$6,879,339.29. Up to the same date, the Foundation had made grants and donations amounting to \$6,472,490.99. At present the Foundation is enabling colleges and universities to promote popular economic education through radio, recordings, motion pictures, books and pamphlets, fellowships, and class instruction. Among such projects aided by the Foundation are: the *University of Chicago Round Table of the Air*, a weekly radio discussion of economic phases of national and international questions; the New York University Film Library, which distributes sound motion pictures and recordings; and the Public Affairs pamphlets, containing popular digests of current economic researches, issued continuously by the Public Affairs Committee of New York.

In addition the Foundation is currently providing support for seminars on current economic problems at New York University and at the American University. Members of these seminars include graduate students and community leaders. The Foundation also lends its support to the Department of

Government Management at the University of Denver.

In the field of applied economics, the Foundation aids the State universities of Kentucky, Florida, and Vermont in carrying on experiments designed to help low-income groups. The experiments aim to discover whether solely through instructing school children in simple, inexpensive ways of improving diet, housing, and clothing, the community level of living can be raised. To enable teacher-training institutions throughout the country to study these experimental centers at first-hand, special grants were made to the American Association of Teachers Colleges for traveling fellowships.

SMALLER WAR PLANTS CORPORATION. An emergency war agency of the U.S. Government, which reports through the War Production Board; created by act of Congress on June 11, 1942, with a capital stock of \$150,000,000, for the most effective utilization of small business concerns in the war effort. Management is vested in a board of five directors appointed by the chairman of the WPB. The Corporation assists in the procurement of prime contracts and subcontracts, leases machinery, lends money, aids in the disposal of surplus materials and equipment to small business, and assists in the solution of technical and financial problems. The Corporation also participates with other agencies in facilitating the prompt and equitable settlement of the claims of small prime and subcontractors arising from the termination of war contracts. Chairman of the Board of Directors: Maury Maverick.

SMITHSONIAN INSTITUTION. The affairs of the Institution are administered by a Board of Regents consisting of the Chief Justice of the United States, the Vice President, three members of the Senate, three members of the House of Representatives, and six citizens other than members of Congress. The executive officer directly in charge of the Institution's activities is the Secretary. Dr. Alexander Wetmore is the present Secretary.

Research and explorations, which normally form the major part of the Institution's program for the "increase of knowledge," have been curtailed, owing to wartime conditions. The new field expeditions that were carried on were concerned in the main with matters connected with the conduct of the war or with commitments dating back to the prewar period, or with the improving of cultural relations with the other American republics. The staff continued to devote a considerable part of its time until the end of the war to furnishing technical information to the Army, Navy, and war agencies. Many of the requests called for extended research, reports, or conferences. The Institute of Social Anthropology, an autonomous unit of the Bureau of American Ethnology, created within the Institution to carry out cooperative work in anthropology with the other American republics, continued its program of teaching and research in Mexico and Peru. Several members of the Smithsonian staff conducted field expeditions in South and Central American countries in cooperation with scientists of those countries. Preparation of the monumental Handbook of South American Indians continued; four volumes are now in press and the fifth is nearing completion.

The "diffusion of knowledge" is carried on by publication of the results of scientific research and exploration. The publications of the Institution proper and the bureaus under its administrative direction appear in 13 distinct series as follows: *Smithsonian Institution*, Annual Report (with gen-

eral appendix made up of selected articles reviewing the year's advances in science), *Contributions to Knowledge* (suspended), *Miscellaneous Collections*, and special publications; *National Museum*, Annual Report, Bulletin, Proceedings, and Contributions from the National Herbarium; *Bureau of American Ethnology*, Annual Report and Bulletin; *Astrophysical Observatory*, Annals; *National Collection of Fine Arts*, Catalog; and *Freer Gallery of Art*, Oriental Studies. Copies of all publications in these various series are distributed free to a large list of libraries, learned societies, and specialists throughout the world, and certain of the less technical publications, such as the Smithsonian Reports, are widely distributed among the general public. During the year 56 publications were issued, and the total number of publications distributed was 141,635. Outstanding among the year's publications may be mentioned *Weather Predetermined by Solar Variation*, by C. G. Abbot; *Review of the Spider Monkeys*, by Remington Kellogg and E. A. Goldman; *Checklist of the Coleopterous Insects of Mexico, Central America, the West Indies, and South America*, part 3, compiled by Richard E. Blackwelder; and *The Contemporary Culture of the Cáhita Indians*, by Ralph L. Beals. There were also reprinted the first two volumes of *World Weather Records*, assembled and arranged by H. Helm Clayton, the first volume containing records up to 1920, and the second, records for the period from 1920 to 1930.

The Smithsonian library, made up of 10 divisional libraries and 35 sectional libraries, now contains 918,460 volumes, pamphlets, and charts. Accessions during the year numbered 4,844 volumes, pamphlets, and charts.

ALEXANDER WETMORE.

SOCIAL DEMOCRATIC FEDERATION, U.S.A. National Chairman is Algernon Lee, New York, N.Y.; national vice-chairmen, Louis P. Goldberg, New York, N.Y., and Dr. William J. Van Essen, Pittsburgh, Pa.; secretary, August Claessens, New York, N.Y. Headquarters: 7 East 15th St., New York, N.Y.

SOCIALIST LABOR PARTY. National Secretary is Arnold Petersen; national treasurer, Paul Herzog. Headquarters: 61 Cliff St., New York, N.Y.

SOCIALIST PARTY. Socialist activity in the United States concentrated on promoting national legislation and backing reforms. It strove for the development of a mass party of labor, farmers and co-operators. The Party backed the Full Production Authority Act and supported fair employment practices, anti-lynching and anti-poll tax legislation. It opposed peacetime military conscription and urged the opening of America's doors to refugees.

Prof. Maynard C. Kreuger, Chicago, Ill., is National Chairman; Harry Fleischman, New York, N.Y., is National Secretary; and William Becker, New York, N.Y., is National Labor Secretary.

SOCIAL SECURITY BOARD (SSB). Events in 1945 continued to emphasize the importance of existing social security provisions in the United States. With the collapse of Germany, changes in the character, tempo, and geographic concentration of war production were reflected in layoffs and cut-backs in employment. While labor shortages were still acute in most places and laid-off workers, in general, were quickly reemployed, an increasing number of persons had to claim their rights to social insurance. After the long wartime decline, assistance programs

also recorded an upturn in applicants. The capitulation of Japan broadened the extent to which the social security program was called on to provide the substitute for earnings necessary when old age, lack of skills and experience, or other handicaps to self-support forced some people out of the jobs they had been able to hold in the war emergency or when other changes reduced or stopped the earnings and military allowances from which workers and servicemen had helped support dependent relatives.

Because of the insurance and assistance programs established by the Social Security Act a decade ago, the country was far better able to face the abrupt transition to peace than it was at the close of World War I. Some 1,350,000 workers aged 65 and over had acquired, as of Jan. 1, 1946, the fully insured status which would make them eligible for retirement annuities under the Federal old-age and survivors insurance system, and the face value of current survivor insurance under that program exceeded \$50,000,000,000. About 36,000,000 workers had sufficient 1944 wage credits under State unemployment insurance laws to make them eligible for unemployment benefits if they lost their job and could not immediately get another. All States and Territories were using Federal grants-in-aid toward assistance payments to needy persons aged 65 and over; by September 1945 all but Nevada were similarly using Federal funds to make payments to needy dependent children deprived of parental support or care, and by the close of 1945 all but Alaska, Missouri, Nevada, and Pennsylvania were providing aid to the needy blind with Federal financial participation.

A decade of experience in administering the two insurance and three assistance programs under the act has focused attention on the groups of persons and risks for which similar protection is lacking. The 1944 platforms of both major political parties, pronouncements of international and national labor organizations and employer associations, and resolutions of welfare organizations and other civic groups have almost unanimously urged extension of the coverage of old-age and survivors insurance and unemployment insurance to types of work now excluded, provision of similar protection against the risks of wage loss from sickness or disability, and Federal grants to States for programs for assistance to needy persons who fail to qualify for aid under the special types of assistance, for which alone such grants are now authorized under the Social Security Act. Further, the President, the Social Security Board, and many other public and private organizations have urged that tested social insurance and assistance principles be applied in nation-wide programs to meet the costs of medical care.

Opportunity for employment is the basic defense against want, but other sources of livelihood must be provided for children who lack parental support and for their mothers or other relatives who give them full-time care; for persons whose advanced age or other handicap precludes earning; and for families in which the breadwinner is sick or disabled or is unable to get suitable work. Moreover, the lack in some localities of adequate medical facilities and the barrier of costs are major causes of the substandard health of the many boys and men who could not meet Selective Service requirements and of a large share of the loss of production and income when workers cannot be at their jobs because of sickness. The Board's recommendations for extending social security appear in its annual reports to Congress; progress in the decade 1935-45

is appraised in the August 1945 issue of the *Social Security Bulletin*; special analyses and periodic data appear in monthly issues of the *Bulletin* and in its calendar-year supplement, the *Social Security Yearbook*.

Old-Age and Survivors Insurance. In an average week of 1944 approximately three-fifths of the persons in the civilian labor force were in industrial and commercial jobs that carry wage credits toward benefits under this program. Of some 73,000,000 living workers who, by Jan. 1, 1946, had been in such jobs, more than half were fully or currently insured. Fully insured status is acquired as of a given time by workers who have had wage credits of \$50 or more in at least 6 calendar quarters and in at least half the number of quarters elapsed since 1936 or attainment of age 21, if later, and the quarter in which the worker reaches age 65 or dies. Certain survivor benefits are payable for deceased workers who were only currently insured, that is, who have had wage credits of \$50 or more in at least 6 of the 12 quarters immediately preceding death.

As of the beginning of 1946, about 33,000,000 workers were fully insured, 8,500,000 were currently insured only, and 31,500,000 who had been in covered jobs at some time since the beginning of the system were uninsured. Some of these last had lost their previous insured status because of transfer to military service or other noncovered employment or temporary or permanent withdrawal from the labor force. Others had only recently entered covered employment. Still others had had only intermittent jobs in covered employment, such as holiday work in stores or seasonal work in canneries, and may or may not eventually meet the conditions for insured status. Many of the uninsured women will later qualify for wife's or widow's benefits on the basis of their husbands' wage records.

At the end of September, some 556,000 fully insured workers were on the retirement benefit rolls, among them more than 164,000 men whose aged wives were also entitled to benefits based on the husband's wage record. The average combined benefit in force on Sept. 30, 1945, was \$38.10 for a retired worker and his wife; the benefits of retired men without entitled wives or children averaged \$24.30 a month, and the average for retired women was \$19.40. The average monthly survivor benefit in force for a family at the end of September was \$50.40 for a widow with 3 or more child beneficiaries in her care; \$20.20 for an aged widow alone, \$13.20 for the parent of a deceased fully insured worker, and \$12.40 for a single child beneficiary.

Payments under the program in September totaled \$24,368,000, including both retirement and survivors' monthly benefits and the \$1,697,000 in lump-sum payments made at the death of an insured worker who left no survivor immediately eligible for monthly benefits.

Because the majority of persons eligible have apparently preferred to keep or get jobs in covered employment while they could, the beneficiary rolls mounted less sharply during the war than would otherwise have been expected. Increases in the number of insured workers and declines in work opportunities were apparent, however, in the first 9 months of 1945, when monthly benefit awards exceeded the total for 1944. At the end of June, nearly 170,000 persons were foregoing their monthly benefits because they, or the beneficiary or whose wage record their benefit rights were based, were in covered employment, and in addi-

tion, some 750,000 insured workers had failed to claim benefits for which they were eligible, presumably also because they preferred to hold covered jobs.

Congress has successively postponed the originally scheduled increase in the contribution rate, most recently for the calendar year 1946. Covered workers and their employers—each contributing 1 percent of wages up to and including \$3,000 a year—paid \$986,000,000 in the first 9 months of 1945 toward financing old-age and survivors insurance. Monthly benefits and lump-sum payments certified in the period amounted to \$207,000,000. The assets of the old-age and survivors insurance trust fund, to which contributions are appropriated and from which benefits and administrative expenses are paid, aggregated nearly \$7,000,000,000 on Sept. 30, 1945.

Federal-State Unemployment Insurance. An estimated 6,000,000–7,000,000 jobs were wiped out in the 10 weeks following the capitulation of Japan. In September about 610,000 workers received an aggregate of \$50,410,000 in unemployment payments under the laws of the 51 States and Territories, compensating for a total of nearly 2,700,000 man-weeks of unemployment. Others who had filed claims found jobs before they drew benefits, and other workers who had been laid off withdrew from the labor force temporarily, for a rest, or to continue schooling or attend to household duties. Large-scale unemployment materialized in only a few areas in the autumn; most displaced workers were quickly reemployed. Most of those who drew benefits were women or handicapped persons, while most of the jobs offered were for men who could do heavy manual work.

Many States amended their unemployment insurance laws, but extreme differences remain in the protection afforded by the various State laws. The average weekly payment for total unemployment was \$18.44 in July-September and was made up of widely varying amounts, representing the range from the minimums of \$3 a week or less payable in some States to the maximums of \$28, including allowances to dependents, in others. Under the State laws, the weekly amount, and in many States also the potential duration of payments to an unemployed worker, depend on his prior earnings in covered employment.

In 1944, an estimated 44,000,000 different workers received wage credits under State unemployment insurance laws, a slight decline from 1943. Because several States limit the coverage of their programs to workers in industrial and commercial firms employing 2, 3, 4, or 8 or more workers, the estimated number of workers acquiring wage credits toward unemployment insurance in an average week of 1944 was 29,000,000, about 1,400,000 less than the number acquiring credits toward old-age and survivors insurance.

States paid out about \$127,000,000 in the first 9 months of 1945, and at the end of that period had nearly \$7,000,000,000 in funds available for benefits. Workers contribute toward the system in only four States; in others, employers pay specified percentages of wages, up to and including the first \$3,000 a year. In 45 States the rates of employer contributions vary with the individual firm's experience with unemployment. These "experience-rating" provisions are diverse in character and result in large differences in the contributions paid by employers in similar circumstances. Amounts collected in the first 9 months of 1945, including the additional "war-risk" contributions levied in 12 States, aggregated \$925,000,000, \$73,000,000

less than in the comparable period of 1944. These contributions are deposited in the unemployment trust fund to the credit of individual States; interest on the State's share of the invested portion of the fund is credited periodically, and States withdraw from their accounts amounts needed for benefit payments.

Public Assistance. During the war years public assistance rolls included relatively few people who could work, even under wartime standards of employability. Declines in these rolls have demonstrated that employability varies with labor-market conditions and that people with any capacity to work prefer self-support to dependency. In 1944, the payments for public aid totaled about \$944,000,000 or one-third the amount in 1940, when, in addition to the expenditures for public assistance, large sums were spent for earnings of persons employed on Federal work projects and small sums for food stamps under programs which terminated in 1943. In 1944 old-age assistance accounted for about three-fourths of all public aid, as contrasted with two-thirds in 1943 and less than one-fifth in 1940. Aid to dependent children was 14 percent of the 1944 total; to the blind 3 percent, and general assistance, 9 percent.

By September, recipient rolls, which had dropped almost steadily during the war emergency, had begun to rise again and the increases were appreciable in some States. General assistance—which is financed by States and localities alone—was particularly responsive to economic changes. The number of requests for this form of aid increased steadily after April in 19 large cities; the chief reason was loss of a job or decrease in earnings. With declines in job opportunities and earnings and in servicemen's allowances, many people who have been living on marginal earnings or on support provided by relatives become dependent on public aid.

Wartime declines in assistance rolls have permitted States to increase assistance payments somewhat in recognition of the rise in living costs. Assistance levels, however, vary greatly and even in war years were inadequate in some areas and for certain groups, especially for recipients of general assistance, for which no Federal funds are provided. In September, the average payment for old-age assistance was \$30.17 for the United States as a whole but ranged from \$11.56 in Kentucky to \$49.83 in the State of Washington; for the blind the range was from \$13.01 to \$53.89, with the same two States in the low and high positions and a national average of \$31.12 for the 46 States sharing in Federal grants-in-aid; the average per family in aid to dependent children was \$48.94 for the 50 States receiving Federal funds for that program, while the extremes, for Texas and Washington, were \$20.83 and \$92.62, respectively. The national average for general assistance was \$29.72 per case, with a range from \$8.42 in Mississippi to \$49.71 in Washington.

The objective of the individual assistance payment is to supply the difference between any income or other resources the needy person himself has and the amount the State agency finds necessary to meet his requirements. Lack of funds, however, has made it necessary for some States to limit the amount payable to any person or family, however great the need; other States have had to disregard such requirements as medical care in determining the amount of the assistance payment; still others have applied a uniform limit to the proportion of the recipient's needs which the assistance payment can meet—allowing the recipient perhaps

only two-thirds or three-fourths of the amount which the State agency finds he needs.

Since the Federal funds granted for State public assistance programs under the Social Security Act depend on the amounts which each State puts up for Federal matching, proportionately more Federal aid goes to the wealthier States than to States where resources are least and need is greatest. The 10 States at the top of the list in per capita income payments in 1944 had 36 percent of the population of the country and received 40 percent of the total amount for public assistance from February 1936 through December 1944; the 10 States with the lowest per capita income in 1944 had 18 percent of the population and received only 8 percent of these Federal funds. Limits to Federal matching—half the State payment to the recipient, but not

more than \$20 a month in Federal funds for an aged or blind person and not more than \$9 a month for one child receiving aid to dependent children and \$6 for each additional child aided in the same family—are also important factors in State inability to meet all the requirements of recipients.

The total amount of public assistance payments in 1944, including programs financed without Federal aid, represented about \$22 per inhabitant in Colorado and less than \$5 per inhabitant in 15 States. Assistance payments in the year for the three special types of public assistance and for general assistance totalled \$944,000,000, of which Federal grants for old-age assistance, aid to dependent children, and aid to the blind under the Social Security Act represented about two-fifths.

ARTHUR J. ALTMAYER.

PAYMENTS TO INDIVIDUALS UNDER FEDERAL OLD-AGE AND SURVIVORS INSURANCE, STATE UNEMPLOYMENT INSURANCE LAWS, AND STATE PUBLIC ASSISTANCE PROGRAMS UNDER THE SOCIAL SECURITY ACT, FISCAL YEARS 1937-45, AND BY STATE, FISCAL YEAR 1944-45

[In thousands]

Fiscal Year and State	Old-age and Survivors Insurance, Payments Certified		Unemployment Benefits *	Public Assistance Payments under the Social Security Act		
	Monthly Benefits *	Lump-sum Payments *		Old-age Assistance	Aid to Dependent Children	Aid to the Blind
Fiscal year:						
1936-37		\$ 60	\$ 964	\$243,229	\$ 40,774	\$ 8,981
1937-38		5,856	179,847	360,626	81,062	11,355
1938-39		14,315	444,235	411,496	103,178	11,906
1939-40	\$ 6,421 *	11,188	482,507	452,632	123,136	21,052
1940-41	57,462	12,715	432,416	505,053	141,591	13,726
1941-42	102,248	14,242	369,745	568,347	154,401	15,016
1942-43	139,139	16,595	176,095	616,569	148,747	16,300
1943-44	173,282	19,156	60,994	679,329	135,156	18,468
1944-45	224,751	25,887	71,209	701,951	138,084	19,802
Alabama	2,868	276	695	5,840	1,468	145
Alaska	61	11	34	525		
Arizona	672	76	72	4,387	654	232
Arkansas	1,212	114	151	5,899	1,568	291
California	15,072	1,761	14,285	89,428	6,025	3,210
Colorado	1,649	152	80	20,184	1,587	214
Connecticut	4,497	615	1,641	5,939	1,731	55
Delaware	603	69	129	254	200	
District of Columbia	1,119	157	356	971	402	94
Florida	3,661	283	876	13,400	1,762	800
Georgia	2,632	315	483	9,059	1,182	349
Hawaii	583	38	3	380	356	19
Idaho	428	30	61	3,513	561	80
Illinois	15,833	2,089	7,497	46,249	10,431	2,034
Indiana	5,999	698	1,256	17,048	2,808	764
Iowa	2,568	234	266	18,088	971	497
Kansas	1,726	181	257	9,678	1,725	397
Kentucky	3,717	299	595	6,944	1,226	248
Louisiana	2,208	245	590	9,850	4,386	444
Maine	1,794	173	572	5,087	947	292
Maryland	3,222	460	803	3,831	1,243	161
Massachusetts	11,564	1,351	2,649	37,529	6,628	478
Michigan	9,656	1,360	11,632	30,249	8,886	503
Minnesota	3,543	379	375	10,659	2,453	406
Mississippi	921	103	159	4,932	878	328
Missouri	5,378	631	953	27,887	4,330	
Montana	710	65	73	3,919	566	120
Nebraska	1,029	120	57	8,121	945	151
Nevada	208	36	33	889		
New Hampshire	1,190	116	121	2,261	520	96
New Jersey	10,714	1,365	3,710	8,745	2,232	205
New Mexico	344	22	10	2,147	1,074	88
New York	31,357	3,570	11,046	43,501	16,546	1,320
North Carolina	3,097	372	322	4,678	1,706	474
North Dakota	265	33	14	3,394	928	45
Ohio	15,059	1,818	778	42,182	4,833	978
Oklahoma	1,597	161	209	25,980	5,712	690
Oregon	2,302	271	228	8,168	1,111	199
Pennsylvania	23,630	2,622	2,582	29,335	15,196	
Rhode Island	2,054	266	1,264	2,840	928	34
South Carolina	1,583	174	222	3,570	1,008	211
South Dakota	354	33	16	3,714	601	57
Tennessee	2,687	281	1,382	7,520	4,042	371
Texas	5,582	663	588	45,097	2,992	1,341
Utah	828	61	183	5,826	1,595	62
Vermont	711	68	62	1,316	228	52
Virginia	3,288	372	251	2,456	1,174	200
Washington	3,954	404	516	28,603	3,448	301
West Virginia	3,655	284	516	4,005	2,999	217
Wisconsin	5,138	561	555	15,587	3,722	498
Wyoming	229	25	5	1,310	173	52

* Includes retroactive payments. State distribution estimated. * Fiscal-year totals represent payments under 1935 act and 1939 amendments. State distribution excludes payments under 1935 act. * Adjusted for voided benefit checks, except for 1936-37; total for 1937-38 estimated. * January-June 1940, since monthly benefits not payable before 1940. * No plan in operation under the Social Security Act.

BENEFICIARIES, RECIPIENTS, AND PAYMENTS UNDER FEDERAL OLD-AGE AND SURVIVORS INSURANCE, STATE UNEMPLOYMENT INSURANCE LAWS, AND STATE PUBLIC ASSISTANCE PROGRAMS UNDER THE SOCIAL SECURITY ACT, BY STATE

State	Old-age and Survivors Insurance, Monthly Benefits in Force, June 30, 1946*		Unemployment Insurance, State Laws		Public Assistance Under the Social Security Act, September 1945				Aid to the Blind	
	Number	Amount	Average Weekly Benefit	Average Weekly Payment for Total Unemploy- ment, July- September 1945	Number of Recipients	Average Payment per Family	Number of Children	Number of Families	Average Payment per Family	Number of Recipients
Total	1,284,700	\$23,607,000	449.720*	\$18.45*	2,034,946	\$30.17	657,737	258,526	\$48.94	54,968
Alabama	18,300	275,000	9,759	15.65	32,589	15.63	14,786	5,341	26.00	767
Alaska	300	7,000	1,320	15.55	1,320	15.63	102	31	26.00	16,01
Arizona	4,000	69,000	1,668	14.77	9,433	38.62	4,024	1,388	39.64	455
Arkansas	8,200	117,000	1,856	12.71	26,220	16.49	10,827	4,083	25.79	1,162
California	82,900	1,826,000	19,311	13.31	158,121	41.30	16,048	6,363	84.01	5,336
Colorado	9,200	169,000	220	13.45	40,131	41.40	8,558	3,125	57.41	36.51
Connecticut	24,800	484,000	19,405	20.37	13,996	39.48	5,208	2,053	79.95	128
Delaware	3,300	60,000	1,352	16.76	1,290	16.82	1,779	272	75.11	194
District of Columbia	16,300	314,000	2,044	17.83	2,379	36.42	1,351	616	68.89	40.42
Florida	18,300	314,000	3,514	13.85	41,852	29.19	14,619	5,878	33.79	2,302
Georgia	18,300	262,000	5,262	25.22	66,347	11.06	9,983	3,979	25.25	2,034
Hawaii	3,200	55,000	1,235	12.30	6,602	23.45	1,520	491	65.21	61
Idaho	3,200	55,000	1,235	12.30	6,602	23.45	1,520	491	65.21	61
Illinois	84,100	1,670,000	67,171	18.92	121,024	32.83	47,333	10,837	50.77	5,205
Indiana	34,800	632,000	12,640	17.78	54,387	23.15	13,710	5,029	31.62	1,927
Iowa	16,200	277,000	4,020	16.36	48,878	32.15	7,602	2,816	51.13	1,043
Kansas	20,200	323,000	6,463	15.39	28,064	29.33	7,181	2,816	51.13	1,043
Kentucky	12,100	202,000	5,442	12.25	48,635	11.56	13,446	4,861	21.58	1,572
Louisiana	20,800	323,000	5,698	16.37	35,847	23.48	8,311	2,955	68.12	1,343
Maine	14,200	221,000	2,145	16.45	14,803	28.10	3,811	1,340	37.57	803
Maryland	11,800	203,000	17,367	19.30	11,485	28.10	3,811	1,340	37.57	803
Massachusetts	18,400	323,000	28,227	19.33	74,669	43.09	17,619	7,118	80.23	974
Michigan	65,100	1,057,000	20,225	20.25	84,690	31.90	31,250	12,909	66.20	1,243
Minnesota	18,800	356,000	3,262	17.06	54,370	30.90	11,554	4,530	49.46	952
Mississippi	7,300	99,000	1,349	12.57	26,887	15.79	7,651	2,939	26.12	37.81
Missouri	30,300	653,000	15,748	17.06	100,146	24.70	29,247	11,220	34.94	1,465
Montana	4,000	76,000	1,112	12.16	10,677	31.66	3,244	1,269	48.01	326
Nebraska	6,300	106,000	678	15.23	23,884	28.97	4,870	2,060	50.36	441
Nevada	1,000	19,000	98	16.92	1,933	38.46	1,933	780	68.02	275
New Hampshire	7,100	129,000	887	13.88	6,518	30.02	1,949	780	68.02	275
New Jersey	64,200	1,091,000	41,218	19.60	23,240	32.18	7,835	3,115	61.20	525
New Mexico	2,300	35,000	33	12.06	5,945	31.03	6,850	2,582	37.56	244
New York	172,200	3,378,000	85,852	19.66	103,032	35.45	49,656	20,879	76.86	2,941
North Carolina	23,100	322,000	5,037	12.20	32,774	12.95	15,643	6,026	25.58	2,390
North Dakota	1,600	26,000	16	12.58	8,665	33.51	3,848	1,390	56.08	111
Ohio	81,900	1,967,000	19,529	17.02	116,873	30.41	20,062	7,318	54.23	3,018
Oklahoma	19,300	370,000	5,262	17.02	20,776	37.11	37,000	15,358	34.82	1,866
Oregon	16,800	270,000	2,933	17.61	20,776	37.11	37,000	15,358	34.82	1,866
Pennsylvania	2,880,000	44,076	44,076	17.83	89,747	30.68	69,914	23,019	80.25	376
Rhode Island	14,200	214,000	8,758	17.35	7,269	34.16	3,387	1,322	94.05	103
South Carolina	160,000	1,600,000	11,377	11.37	21,595	15.53	10,980	3,739	27.02	31.76
South Dakota	38,000	38,000	51	11.16	12,646	25.95	3,516	1,446	37.61	967
Tennessee	18,400	275,000	5,463	12.78	37,809	16.08	28,796	10,992	30.35	215
Texas	35,900	564,000	5,080	14.02	171,278	24.01	24,272	10,050	30.83	1,542
Utah	84,000	84,000	251	23.08	12,704	36.86	4,550	1,802	74.20	4,302
Vermont	4,100	72,000	434	15.84	5,207	23.11	1,481	573	34.49	138
Virginia	21,400	333,000	1,822	11.92	14,926	14.44	9,802	3,461	32.32	164
Washington	21,400	418,000	5,021	20.84	61,753	49.83	9,081	3,659	92.62	957
West Virginia	20,400	342,000	4,578	16.00	18,402	15.56	19,712	7,035	28.00	583
Wisconsin	28,100	535,000	9,131	17.40	44,717	29.54	13,019	5,375	58.14	1,808
Wyoming	1,500	28,000	8	17.19	3,389	36.31	762	275	58.19	117

* State distribution estimated. Data for beneficiaries residing in foreign countries are allocated to State in which claim was filed. * Partial, part-total, and total unemployment. * Excludes California and Michigan; data not reported for September. * Not computed. Average payment not calculated on base of less than 50 families. * No plan in operation under the Social Security Act.

SOCIETIES AND ASSOCIATIONS. The following is a list of some of the leading national and international organizations, with a concise report of their activities during 1945. The organizations are listed alphabetically according to the first specific word in each title. Certain classifications have been omitted in this list because they are presented elsewhere in this volume. The reader is, therefore, referred to the following articles as a supplement: for accrediting associations, to the article on **UNIVERSITIES AND COLLEGES**; for labor organizations, to **LABOR CONDITIONS**; for religious bodies, in addition to the interdenominational groups listed below, to the separate articles on **Churches** and the table on **RELIGIOUS ORGANIZATIONS**; for sport organizations, to articles on various sports and **Amateur Athletic Union**, below. For foundations and trusts, government agencies, learned academies, and institutes, see separate articles. For official international organizations, see **PAN AMERICAN ACTIVITIES** and **UNITED NATIONS**, as well as various separate articles.

Actors' Fund of America, founded in 1882 to care for the impoverished, aged, and infirm members of the theatrical profession. Membership (1944). 2,604. President: Walter Vincent. Secretary: Robert Campbell. Headquarters: 1619 Broadway, New York City. The Fund, supported by donations, benefit performances, and a limited endowment, spends from \$140,000 to \$180,000 a year. A home for retired actors is maintained in Englewood, N. J.

Adult Education, American Association for, founded in 1926 to serve as a clearinghouse for information, initiate activities, and assist enterprises already in operation, and to aid and advise individuals who, although occupied with some vocation or interest, desire to continue their education. Membership. 2,850. President: Lyman Bryson. Director: Morse A. Cartwright. Headquarters. 525 West 120 Street, New York City.

Advancement of Colored People, National Association for the, founded in 1909 to combat the spirit of unfairness which confronted colored people in the United States, safeguard their rights, and secure for them equal opportunity with all other citizens. Membership. 600,000. President: Arthur B. Spingarn. Executive Secretary: Walter White. Headquarters: 20 West 40th St., New York 17, N. Y. The Spingarn medal, an award to "prominent pioneers of a people fighting for its rights on the frontier of intolerance and bigotry," was awarded in 1944 to Mr. Paul Robeson, characterized as a "man who exemplifies the finest in America and American Negro tradition of sportsmanship and contribution to public welfare."

Advancement of Music, National Bureau for the, founded in 1916 to promote musical interest and activities and to aid those interested in such activities. Membership: Anyone contributing \$5 or more. President: Howard Braucher. Bureau Director: C. M. Tremaine. Headquarters: 315 Fourth Avenue, New York City 10. The Bureau cooperates with existing agencies in the field of music and promotes National Music Week (beginning first Sunday in May), now expanded to National and Inter-American Music Week. Has available comprehensive list of publications on many aspects of music including school music, contests and festivals, community music, group instruction and applied music. Merged with the National Recreation Association January, 1943.

Advancement of Science, American Association for the, founded in 1848, a democratic and representative organization devoted to the whole field of science. Organized in 15 sections, it has over 27,000 members and 190 associated societies. President: Dr. Charles F. Ketterling. Permanent Secretary: Dr. F. R. Moulton. Headquarters: Smithsonian Institution Building, Washington, D. C. Publications: *A.A.A.S. Bulletin*, *Science*, *The Scientific Monthly*, technical symposia and nontechnical scientific books. A meeting was held in Cleveland, Ohio, September 11-16, 1944. A general meeting will be held in St. Louis, Mo., March 27-30, 1946.

Advancement of Science, British Association for the, founded in York, England, in 1831. President: Sir Richard Gregory. Secretary: O. J. R. Howarth. Headquarters: Burlington House, London, W. 1. The Association holds an annual meeting at which papers are read (subsequently published) and sets aside an annual sum for scientific researches. In lieu of the Annual Meetings, in wartime the Association has held Conferences, arranged by its Division for the Social and International Relations of Science.

Aeronautic Association, National (NAA), founded in 1922, a nonprofit, nonpartisan organization representing the consumer interest in all phases of aviation. Net paid

membership: 20,000, with 100 chapters throughout the United States. President: William R. Enyart. Manager: Lowell H. Swenson. Headquarters: 1025 Connecticut Avenue, N.W., Washington 6, D.C. Outstanding functions, 1945: promotion of airports and airway facilities; encouragement of private flying; sponsorship of the Joint Aviation Users Conference and the National Aviation Clinic; aviation for public education; model building and flying for youth; development of progressive legislation; fostering of American air supremacy; representing the Federation Aeronautique Internationale in the U.S.; supervision of aircraft records and performances; awarding of the Robert J. Collier Trophy; U.S. Wing of the Robert J. Collier Trophy; U.S. Wing of the Inter-American Escadrille; publisher of *National Aeronautics*, *Model Aeronautics*, *Airport Digest*, *FYI* and *Boletín de Aviación*; guidance activity for veterans.

Aeronautical Sciences, Institute of the, founded October 15, 1932, to advance the sciences applied to aeronautics through the publication of technical papers, the holding of scientific meetings, and other activities contributing to the progress of the aeronautical profession. President: Arthur E. Raymond. Secretary: Robert R. Dexter. Headquarters: 2 East 64th Street, New York City. Annual Meeting of the Institute is scheduled to take place at Columbia University, New York City, January 29, 30 and 31, 1946.

Allied Youth, Inc. has acquired its own national headquarters, The Allied Youth Building, 1709 M Street, N.W. Washington, D.C. during 1945. Allied Youth is a non-sectarian, non-political movement supporting the platform "We stand for the liberation through education of the individual and society from the handicaps of beverage alcohol." The movement functions primarily in the high schools of the nation, its speakers addressing high school student assemblies and organizing Allied Youth Posts to study the alcohol problem and promote an alcohol-free social and recreational program. The National Board of Trustees of Allied Youth includes well-known educators, civic and religious leaders. Outstanding athletes and coaches have membership on the National Advisory Committee. Allied Youth is not concerned with legislation but with helping youth at the point of personal choice, aiding it to get the scientific facts concerning alcohol. Publications include *The Allied Youth*, monthly except August, the *Alcoholfax Educational Service*, and programs and other material for schools and churches. Complete information may be received by addressing W. Roy Breg, Executive Secretary, Allied Youth Inc., 1709 M Street, N.W. Washington 6, D.C.

Amateur Athletic Union of the United States (A.A.U.), founded in 1888 to improve and promote amateur sports and the civic interest of the nation, by the education of all classes in the benefits to be derived by participation in athletics. The A.A.U. establishes a uniform test of amateur standing and uniform rules governing the sports within its jurisdiction, regulates and awards the athletic championship of the United States, and promotes legislation in the interest of sports facilities. President: Willard N. Greim. Secretary: D. J. Ferris. Headquarters: 233 Broadway, New York City 7. For activities and awards during 1945, see the separate articles on the various sports.

American Legion, The. See separate article, **AMERICAN LEGION**.

Antiquarian Society, American, founded in 1812 with the maintenance of a national library of American history as its chief purpose. The library contains nearly 700,000 titles and is free for the use of all qualified scholars. Membership (honorary). 200. President: Samuel Eliot Morison. Director: O. S. Brigham. Librarian: C. K. Shipton. Headquarters: Worcester, Mass.

The Anti-Saloon League of America, founded in 1895 to promote temperance education and legislation. During 1945 the League concentrated its efforts upon temperance education in the States and upon the increase in the number of political units voting no-license under local option laws. In the area of Federal action it urged the broad use of the war powers conferred upon the President by the several War Powers Acts to prevent the waste of materials and manpower during World War II. President: Bishop Ralph S. Cushman; General Superintendent: George W. Crabbe. Headquarters: 131 B St. S.E., Washington 3, D.C.

Archaeological Institute of America, founded in 1879 to promote and direct archaeological investigation and research. Membership: 1,200. President: William Bell Dinsmoor. General Secretary: Meriwether Stuart. Headquarters: 504 Schermerhorn Hall, Columbia University, New York City.

Architects, The American Institute of, founded in 1857 to promote the efficiency of the profession, to advance education in architecture and allied subjects, and to make the profession of increasing service to society. Membership: 5,500. President: James R. Edmunds, Jr. Secretary: Alexander C. Robinson III. Treasurer: Charles F. Cellarius. Executive Secretary: Edward C. Kemper.

Artists Professional League, Inc., American, founded in 1928 to arouse for American art the regard, preference, and support of the American people; to spread de-

pendable technical knowledge among artists; to urge the adoption of a *Fair Jury System* in competitive exhibitions of contemporary visual arts; to be of use in the *Rehabilitation Program* in military and naval hospitals throughout the country; to contribute counsel and ideas throughout the United States on the selection of *War Memorials* that will be of enduring worth and significance and so win wide regard for the community erecting such memorials; and to obtain legislation that will benefit the artist's profession and terminate piracy of designs. In 1945 was published in New York, the late R. W. Gardner's *A Primer of Proportion in the Arts of Form and Music*, sponsored in 1944 by The American Artists Professional League. Since 1933 the League has sponsored the annual nation-wide celebration of American Art Week, November 1-7. In 1945 the governors of 50 states and the mayors of hundreds of cities and towns issued proclamations favoring celebrations of American Art Week sponsored by The American Artists Professional League. Membership: about 2,000 throughout the United States and its territories. National President, F. Ballard Williams. National Secretary Wilford S. Conrow. Headquarters: Carnegie Hall, New York City. At the Annual Dinner, February 24, 1945, the following honors were awarded for excellence in celebrations of American Art Week:

1st, to the Tennessee State Chapter, etching, *Cavendish Common*, by John Taylor Arms; 2nd, to the North Carolina State Chapter, etching *R.F.D.*, by Martin Lewis; 3rd (a) to the Texas State Chapter, etching *Raleigh Tavern*, by Samuel Chamberlain; (b) to the New Jersey State Chapter, etching *Boothbay Harbor*, by James E. Allen; (c) to the Massachusetts State Chapter, reproductive wood engraving by Timothy Cole, after detail of the *Washington*, "Where There Is No Vision The People Perish," painted by Wilford S. Conrow. Honorable Mentions were given to the State Chapters of California, Indiana, Connecticut, Maine and Georgia, and Special Commendations to Puerto Rico, Ohio, Louisiana, Washington, D. C., Michigan, Wyoming and Colorado.

Arts and Letters, National Institute of, founded in 1898 to further the interests of literature and the fine arts. Membership 250. President Arthur Train. Secretary: Henry S. Canby. Headquarters: 633 West 155 Street, New York City. A Gold Medal was awarded in 1945 to Paul Mansford for Sculpture and "The Institute Award for Distinguished Achievement given to an eminent foreign artist, composer or writer living in America" was presented to Richard Beer-Hofmann (who died Sept. 26). Scheduled meetings: Public Ceremonial and Exhibition given jointly with the American Academy of Arts and Letters (founded by 50 members of the National Institute—see ARTS AND LETTERS, ACADEMY OF) in May, 1945, at New York City; Annual Dinner-Meeting, Dec. 19, 1945, in New York City.

Arts and Sciences, American Academy of, founded in 1780 to encourage scientific work and publication. Membership: 800 Fellows and 130 Foreign Honorary Members. President Howard Mumford Jones. Corresponding Secretary: Abbott Payson Usher. Headquarters: 28 Newbury Street, Boston, Mass. During 1944 a number of grants for research work were made from funds given the Academy for that purpose. Meetings are held monthly, October through May.

Arts, The American Federation of, founded in 1909 to develop art and its appreciation. Chapter Membership: 451. Honorary President Hon. Robert Woods Bliss. President: Hudson D. Walker. Director: Thomas C. Parker. Headquarters: Barr Building, Washington 6, D. C.

Asiatic Association, American, founded in 1898 to study relations between Asiatic countries and the United States. Membership: 200. President R. M. Field. Secretary: John B. Chevalier. Headquarters: India House, Hanover Square, New York City. Annual meetings are held the third Thursday in October at India House.

Associated Press, founded in 1900 for the collection of news, photographs, and features. Serves more than 2,500 members and subscribers throughout the world. President: Robert McLean of the *Philadelphia Evening Bulletin*. Secretary: Lloyd Stratton. Headquarters: 50 Rockefeller Plaza, New York City. Scheduled meeting: April, 1946.

Astronomical Society, American, founded in 1899 to advance astronomy and closely related branches of science. Membership: 608. President: Harlow Shapley. Secretary: Dean B. McLaughlin, Observatory, University of Michigan, Ann Arbor, Mich. The Henry Norris Russell Lectureship was established in 1945. Scheduled meetings: February, 1946, New York City.

Audubon Society, National, organized in 1905 to arouse public appreciation of the value of, and recognition of the need of, conservation of wildlife, soil, plants, and water, and the interdependence of these natural resources. Membership: 75,000 individuals and 200 member societies with membership of 60,000 individuals; also, 1,600 non-member contributors. President: John H. Baker. Chairman of the Board of Directors: Ludlow Griscom. Headquarters: 1006 Fifth Avenue, New York 28, New York. Activities during 1945 included enrollment of 857,744

children throughout the United States and Canada in 13,686 Audubon Junior Clubs in schools, camps and youth organizations; spring and summer courses in natural history and conservation conducted at the Audubon Nature Center in Greenwich, Connecticut; Audubon Wildlife Screen Tours with ten famous nature lectures in forty principal Midwestern cities; Audubon staff lectures addressing 1,000 audiences reaching 850,000 individuals; protective warden service provided for wildlife on some 3,000,000 acres of land and water in Maine, Connecticut, New York, New Jersey, Pennsylvania, Florida, Louisiana, Texas and California.

Automobile Association, American (A.A.A.), founded in 1902 to provide a nation-wide network of service and protection for car-owning members and to work for the improvement of motoring conditions generally. Membership in A.A.A. clubs: Over 1,350,000. President: H. J. Brunnier; General Manager: Russell E. Singer. Headquarters: 17th and Pennsylvania Avenue, N. W., Washington 6, D. C. During 1945, which the Association termed the most critical year of the war for transportation, the organization intensified its efforts to impress upon all car owners the vital necessity for car and tire conservation. This program assumed an even greater urgency after V-E Day when a noticeable trend away from conservation practices threatened to bring about a transportation crisis of major proportions. The let-down inspired a letter from President Harry S. Truman, sent on the eve of the Potsdam Conference, asking the AAA to tell motor car owners that each of them owed it to himself and his country to conserve his vehicle and the rubber on it. This assignment was carried out through press releases, magazine articles, the radio, pamphlets and other material sent out by AAA national headquarters and 650 affiliated clubs and branches all over the country. After V-J Day the organization went full speed ahead on its program of reconvertng to meet the peacetime requirements of the motoring public. This includes stepped-up activity in the interests of a truly national network of superior type highways, and preparations for the expected tremendous increase in highway travel, forecast in AAA surveys. The organization also re-dedicated itself to its historic fight for fair motor vehicle taxation, and for State constitutional amendments prohibiting diversion of motor vehicle funds to other than highway uses. Two anti-diversion fights spear-headed by AAA clubs met with success in the November elections. These were in Pennsylvania and Kentucky, where such amendments were adopted by an overwhelming vote. The year also saw the end of the \$5 Federal Use Tax on cars, opposed vigorously and consistently by the AAA.

Automobile Manufacturers Association, founded in 1913 for service to the motor industry. Membership: 32. President: Alvan Macauley. Secretary: Albert Bradley. General Manager: George Romney. Headquarters: New Center Building, Detroit 2, Mich.

Bacteriologists, Society of American, founded in 1899 to promote the science of bacteriology and bring together American bacteriologists and other microbiologists for demonstration and discussion of methods and consideration of subjects of common interest. Membership: about 2,500. President: Dr. Stuart Mudd, University of Pennsylvania, Philadelphia. Secretary-Treasurer: Dr. L. W. Parr. Headquarters: George Washington University, 1335 H. St., N.W., Washington 5, D. C. Annual meeting for 1945 not held due to wartime emergency. Meeting in 1946 will be held May 21-24 in Book Cadillac Hotel, Detroit, Michigan.

Bankers Association, American, founded in 1875 to promote the welfare and usefulness of banks, secure uniformity of action on subjects of importance and provide opportunity for discussion thereon, and to provide educational opportunities for bank officers and employees. Membership: 15,613. President: Frank C. Rathje. Headquarters: 12 East 36 Street, New York 16, N. Y., 719-15 Street, N.W., Washington 5, D. C., 105 W. Adams Street, Chicago 8, Illinois.

Banking, American Institute of, founded in 1900 to further the education of bankers in the theory and practice of banking and in those principles of law and economics that pertain to the banking business, and to establish and maintain a recognized standard of banking education by means of official examinations and the issuance of certificates of graduation. Membership: about 60,000. Secretary: Floyd W. Larson. Headquarters: 12 East 36 Street, New York City.

Bar Association, American, founded in 1878 to advance the science of jurisprudence, promote the administration of justice and uniformity of legislation and judicial decision, uphold the honor of the profession, encourage cordial intercourse among members of the Bar, and correlate activities of State Bar Associations. Membership: 35,000. President: Willis Smith. Executive Secretary: Olive G. Ricker. Headquarters: 1140 North Dearborn Street, Chicago, Ill. In 1945 the Ross Essay Prize was awarded to Robert A. Sprecher, Chicago, Illinois. See LAW.

Bible Society, American, founded in 1816 to encourage wider circulation of the Holy Scriptures without note or comment throughout the world. Membership: probably

over 15,000. President: Daniel Burke, LL.D.; General Secretaries: Dr. Eric M. North, Mr. Frank H. Mann, Mr. Rome A. Betts, Dr. F. W. Cropp, Dr. Robert T. Taylor. Treasurer: Rev. Gilbert Darlington. Headquarters: Park Avenue and 57 Street, New York City. Universal Bible Sunday will be observed Dec. 8, 1946. The 1946 annual meeting will be held May 9.

Bibliographical Society of America, founded in 1904 to promote bibliographical research and issue publications. Membership: 1160. President: R. W. G. Vail. Permanent Secretary: Nelson W. McCombs, 100 Washington Square, New York 8, N.Y. Mailing Address: P. O. Box 397, Grand Central Annex, New York 17, N.Y.

Blind, Inc., American Foundation for the, founded in 1921 to promote those interests of the blind which cannot be advantageously handled by local agencies. President: M. C. Migel. Executive Director: Robert B. Irwin. Headquarters: 15 West 16 Street, New York City. Activities include research, assistance and consultation service to local agencies, special services to individuals, scholarships, a reference and lending library, and manufacture of Talking Books for the blind.

B'nai B'rith (Sons of the Covenant), oldest Jewish service organization, founded in 1843 to further the unity of the Jewish people and to serve humanitarian and community causes through a program encompassing youth welfare, education, community and social service, interfaith understanding, defense of Jewish rights, philanthropy, Americanism. Membership: 240,000. President: Henry Monsky. Secretary: Maurice Bisgyer. Headquarters: 1008 K Street, N. W., Washington 1, D. C.

From Pearl Harbor to V-J Day, B'nai B'rith compiled a war service record expressed in the following figures: 527 members killed or missing in action and 502 decorated; 1,500 recreational facilities equipped for the Army and Navy; 650 fighting ships equipped with recreational material; \$900,000 contributed to the Red Cross and other United Nations relief agencies; \$700,000,000 worth of war bonds sold; 2,500,000 servicemen and women entertained.

B'nai B'rith's president was an official consultant to the American delegation to the United Nations Conference in San Francisco. In memory of Franklin D. Roosevelt, the B'nai B'rith Women created a Four Freedoms Library at the University of Illinois. B'nai B'rith's Vocational Service Bureau published two charts on the civilian uses of skills acquired in the Army and Navy. Both charts received world-wide acclaim by the armed forces and by agencies working to readjust discharged veterans.

All of B'nai B'rith's long-time agencies for service—Hillel Foundations, B'nai B'rith Youth Organizations, Anti-Defamation League, Americanism Department and Vocational Service Bureau—were re-tooled for postwar service. On behalf of its members abroad who survived the Nazi terror B'nai B'rith created a European Advisory Council to provide relief and rehabilitation assistance. The Leo N. Levi Memorial Hospital, sponsored by B'nai B'rith, launched the nation's first arthritis research institute. The new Wendell Wilkie Memorial Building in New York City had the support of B'nai B'rith, two of those departments occupy quarters in the building.

Botanical Society of America, Inc., established in 1906 as a clearinghouse for the botanists of America. It supports projects of general interest to botanists, provides an opportunity for the presentation and publication of research studies, and accepts and administers funds for certain purposes. The Society will hold its annual meeting in conjunction with the A.A.A.S. at St. Louis, Mo., March 27-30, 1946. The official publication is *The American Journal of Botany*. Membership: 1400. President: I. W. Bailey. Secretary: John S. Karling, Department of Botany, Columbia University, New York, N. Y.

Boy Scouts of America, founded in 1910 to promote the ability of boys to do things for themselves and others, to train them in Scoutcraft, and to teach them patriotism, courage, self-reliance and kindred virtues. Membership (Oct. 31, 1945) 1,927,991. President, Walter W. Head; Chief Scout Executive, Elbert K. Fretwell; Chief Scout, James E. West. Headquarters 2 Park Avenue, New York 16, N. Y. In 1945 major emphasis was placed on rebuilding Scouting throughout the seventy different lands where Scout organizations had existed before World War II. The World Friendship Fund was established and the first contribution allocated to the Philippines. Scouts worked at government requests for war service including the following: two War Loan Campaigns, for which the government made available flags and insignia to Units qualifying; General Eisenhower Waste Paper Campaign in March and April, resulting in 310,000,000 tons of waste paper—General Eisenhower authorized medals and recognition for Scouting Units in his name; the Green Thumb Campaign to grow food for freedom. Senior Scouting, including Air Scouting, Explorer Scouting and Sea Scouting, enrolled many young men. A new Senior Scouting Unit was authorized, the Senior Scouting Unit for boys following any or all Senior Programs.

Boys' Clubs of America, Inc., a national organization of Boys' Clubs for the development of boys physically, in vocational skills and character. Membership: 260 member

organizations with over 250,000 boy members. Chairman: Herbert Hoover. President: William Edwin Hall. Executive Director: David W. Armstrong. Headquarters: 381 Fourth Avenue, New York, 16. Boys' Clubs of America is making plans for a large expansion of services to boys and especially to older boys who face new employment and recreation problems.

Broadcasters, National Association of, founded in 1922 to foster and promote the development of the art of radio broadcasting; to protect its members in every lawful and proper manner from injustices and unjust exactions; to foster, encourage and promote laws, rules, regulations, customs and practices which will be for the best interest of the public and the radio industry. Membership: 870. President: Justin Miller. Executive Vice President: A. D. Willard, Jr. Secretary-Treasurer: C. E. Arney, Jr. Headquarters: 1760 N Street, N. W., Washington 6, D. C.

Business and Professional Women's Clubs, Inc., The National Federation of founded in 1919 to bring about the spirit of cooperation among business and professional women of the United States and to extend their opportunities and their sense of responsibility for social and economic conditions. Membership: over 91,000. President: Margaret A. Hickey. Acting Executive Secretary, Olive H. Huston. Headquarters: 1819 Broadway, New York City. The Federation's program for the year beginning July, 1945, Our World to Build, is a program of action for women who work. It is focussed on women's responsibility in politics, in economic development for jobs, in employer-employee relations, and toward a world of justice and order.

Camp Fire Girls, Inc. has pioneered since its origin in 1911 to develop a character-building recreational program now enjoyed by 340,250 teen-age members. With an impressive record of war service behind them, these girls mobilized themselves in 1945 for community service in peace.

"Hi, Neighbor!" was the special citizenship project carried on by Camp Fire Girls during 1945 to celebrate the organization's birthday, an annual custom. In this program the girls became better acquainted with the advantages and needs of their own neighborhoods. They also concentrated on the contributions made to each community by different racial backgrounds and foreign lands. A Neighborhood Fair provided a grand climax to the "Hi, Neighbor!" project. This event featured booths exhibiting "Neighborhood World Treasures," "Dolls of All Nations," "Service Men's Souvenirs from World Neighbors," and a "Neighborhood Hall of Fame."

This feeling of world friendship inspired several ceremonies held by Camp Fire groups throughout the nation to mark the opening of the San Francisco Conference of the United Nations. A delegation of girls presented a Treasure Chest of Books for French children to the official representatives of France at the San Francisco Conference. During the summer the emphasis on international good will was continued through a United Nations theme for the camping season. The 1946 birthday project is titled "At Home in the World" and will star the vital role of the home in building a family of nations.

On September 18, 1945, thousands of Camp Fire Girls observed a national "Share the Food Day" by eating meals typical of the meager diet of war-devastated nations. Cash savings in food cost were sent to the Edith M. Kempthorne Fund for furthering Camp Fire's international friendship program. In the Victory Loan Drive of 1945 Camp Fire Girls were active in the sale of bonds dedicated to occupational therapy for aiding the rehabilitation of the wounded.

President: Dr. Bernice Baxter. Secretary and National Executive: Miss Martha F. Allen. Headquarters: 88 Lexington Avenue, New York 16, N.Y.

Cancer Society, Inc., American founded in 1913 for the purpose of saving lives from cancer by educating the public about the facts of the disease. It does not treat patients, nor administer hospitals, clinics, or laboratories. Membership: 1,050, composed largely of leaders in the fields of medicine and science. President, Dr. Frank E. Adair, Secretary: Dr. Eugene P. Fendergrass. Headquarters: 350 Fifth Avenue, New York 1, N.Y. The lay educational program is conducted by the Field Army, numbering approx. 300,000 volunteer members. Mrs. Harold V. Milligan, National Commander. Highlight of its year's work is the educational and enlistment campaign conducted each April, designated by Congress as "Cancer Control Month." In 1945 for the first time the Society asked the public to support a program of fundamental research in the various fields of scientific activities involved in cancer control. The problems range from the need for more information on the behavior of normal and malignant cells and the differences between them, to the problem of devising improved methods of diagnosis and treatment. This research will be conducted under the direction of the newly formed Committee on Growth of the National Research Council of the American Academy of Sciences. The first allotment of \$500,000 has been made to this committee. Additional funds will be appropriated as available and as the committee develops recommendations. Service to the cancer patient is assisted by the State divisions of the Society under the

immediate and consistent supervision of the local medical profession.

Care of European Children, Inc., U.S. Committee for the, organized July 1, 1940, to bring children from war environment of Europe to homes in the United States. The organization has been responsible for some 2,000 children, 5 to 15 years old, Protestant, Catholic, and Jewish, representing 15 nationalities, and operates under special immigration procedure authorized by government. It sponsors unaccompanied European children not individually sponsored by parents or relatives. Program includes collection of funds, finding homes, placing children and providing for proper care. Honorary President: Mrs. Franklin D. Roosevelt. President: Marshall Field. Acting Director: Miss M. Ingeborg Olsen. Secretary: Miss Agnes King Inglis. Treasurer: Jackson Martindell. Headquarters: 215 Fourth Avenue, New York 3, N.Y.

Chamber Of Commerce, International, founded in 1920 to provide business men and organizations with a continuing mechanism for interchange of information, joint study, consultation and periodical conference; an organization for leadership in the field of international economic policy. Its activities, curtailed during the war, again are being expanded to refocus business viewpoints and enable the Chamber to offer full consultative assistance to the Economic and Social Council of the United Nations Organization and related agencies in the building of a solid economic base for peace. Membership National Committees in 31 countries, affiliated organizations in 18. President: Winthrop W. Aldrich of the United States. Chairman of the U. S. Associates, which is the re-organized group that has replaced the old American Section: Philip D. Reed, Executive Director John P. Gregg. Headquarters of the I.C.C. 38 Cours Albert Premier, Paris 8eme, France. Main office of the United States Associates 570 Lexington Avenue, New York, N.Y.; Washington office: 1615 H Street N.W.

Chamber of Commerce, United States Junior, an affiliated group of young men's organizations devoted to leadership training, civic service and development of active citizenship. Membership nearing 100,000, with many thousands still serving in the Armed Forces. Age limits: 21 thru 35. The organization was founded in 1920 and is now functioning in every state and territory of the United States, with associate members in Canada, all Central American countries, New Zealand, Australia, Great Britain, Brazil and Argentina. Headquarters: The LaSalle Hotel, Chicago, Illinois. President: Henry Kearns. Executive Vice-President: Rex McMorris. Its principal activities: Aviation projects, Juvenile, Sports Promotion, Employment and Job Training Opportunities for Returned Veterans, "Hold That Line" Safety Program, designed to reduce traffic and industrial accidents, "Community Face-Lifting," a program to beautify and modernize community business areas, Public Health Program prepared to cooperate with the existing health agencies in the elimination of social diseases, Fire Prevention Program designed to reduce fire loss in residential and business areas, a Governmental Affairs Activity presenting a program to stimulate thought and activity by young men upon matters of national, state and local importance. The principal contribution made by Jaycee participation is Leadership Training, "Young Men Learning Civic Consciousness and Responsibility Through Constructive Action." National magazine, *Future*. The 1946 Convention to be held in Milwaukee, Wisconsin June 25 thru 29.

Chamber of Commerce of the United States, established in 1912, primarily as a vehicle for the expression of national business opinion on important economic questions. Membership: 2,217 chambers of commerce and trade associations, 9,463 individual business men, and 6,353 firms and corporations. President, Eric A. Johnston. General Manager: Ralph Bradford. Headquarters: 1615 H Street, N.W., Washington 6, D.C. The Chamber is centering its attention particularly upon reconversion problems. Chamber spokesmen appeared before congressional committees to present a practical business viewpoint on pending legislation. Twelve service departments are maintained covering the main divisions of business activity. Publications include the *Nation's Business*, a monthly, *Business Action*, weekly, special legislative bulletins, and committee reports. Several special committees, besides the regular departmental committees, were engaged during the year in studies of important problems.

Cheautauque Institution, founded in 1874 for religious and educational purposes. President: Ralph H. Norton. Secretary: Charles E. Peirce. Headquarters: Chautauque, N.Y. A program of music, lectures, and religious services is conducted during July and August each year.

Chemical Society, American, founded in 1876 to advance chemistry, chemical research and knowledge, and the qualifications and usefulness of chemists; incorporated under Act of Congress, 1938. Membership: 48,100. President: Bradley Dewey. Secretary: Alden H. Emery. Headquarters: 1155 Sixteenth Street, N.W., Washington 6, D.C. The American Chemical Society Award in Pure Chemistry (sponsored by Alpha Chi Sigma fraternity) to Frederick T. Wall; the Borden Award in the Chemistry of Milk to Ben H. Micolet; the Eli Lilly and Company Award to Max A. Lauffer. No national meet-

ings; 12 local meetings in miniature; 3 regional meetings. Three new local sections chartered. ACS Educational Fund established.

Child Labor Committee, National, founded in 1904 to promote legislation dealing with child labor and related subjects, conduct investigations, advise on administration, and maintain an information service. Membership: about 15,000. General Secretary Gertrude Folks Zimand. Headquarters: 419 Fourth Avenue, New York 16, N. Y. Activities in 1945 included promotion of higher standards in state child labor and compulsory education laws to keep children in school to 16 as a postwar measure; field assistance to State groups working for improved laws; support of Federal aid to education and other measures to provide more and better education; study of part-time school and work programs under school supervision; participation in hearings and conferences on Federal and State bills affecting child labor and related subjects and in conferences called by the Children's Bureau and other Federal agencies to consider postwar needs of youth; a public information service, publication of a monthly bulletin, pamphlets, leaflets, magazine articles, etc.

China Society of America, The, founded in 1913 to promote friendly relations and a better understanding between the peoples of the United States and China. Membership: 500. President: Clark H. Minor. Headquarters: 570 Lexington Avenue, New York City 22. In addition to distributing information on China to schools and clubs and publishing *China* magazine, the Society holds dinners and luncheons throughout the year for prominent Chinese and Americans coming to and from China.

Christian Endeavor, International Society of, formed in 1885 to further the training of young people in the Christian life, among societies and unions of about 50 evangelical denominations in the United States and Canada. Membership: approximately 2,000,000. President: Dr. Daniel A. Poling. Executive Secretary: Carroll M. Wright. Headquarters: 41 Mt. Vernon Street, Boston 8, Mass.

Christians and Jews, The National Conference of, founded in 1928 to promote justice, amity, understanding, and cooperation among Protestants, Catholics, and Jews in the United States. Membership, 40,000. Co-Chairmen: Arthur H. Compton, Carlton J. H. Hayes, Roger W. Straus. President: Everett R. Clinchy. National Headquarters: 381 Fourth Avenue, New York City. The Conference sponsors a program of education in churches, schools, military training centers, and all types of community organizations. It sponsors Religious News Service, an objective news gathering and dispensing agency which provides news releases and feature materials for newspapers and journals. It has 55 regional and city offices and 300 Round Tables in various population centers.

Churches, The World Council of, established as a provisional committee after the world conferences at Oxford and Edinburgh in 1937 to unite the churches of the world on the federal principle for cooperative service and the promotion of Christian unity. Membership: 90 denominations in 30 countries. Vice-Chairmen: Dr. Marc Boegner, Archbishop S. Germaines, Dr. John R. Mott. General Secretary: Dr. W. A. Visser 't Hooft, Geneva; Assistant General Secretaries: Rev. Oliver S. Tomkins, London; Dr. Henry Smith Leiper, New York. Headquarters: 17 Route de Malagnou, Geneva, Switzerland; 297 Fourth Avenue, New York City 10, 21 Bloomsbury Street, London, W.C.1. The American Section meets in New York City on the first Tuesday in December. A Department of Reconstruction and Inter-Church Aid for the churches of Europe has been set up in Geneva.

Citizens National Committee, Inc. (formerly Citizens Emergency Committee on Nondefense Expenditures, Inc.), organized in July, 1941, to keep the public informed with respect to legislative proposals and administrative procedures, to assist Congress and other public officials in their effort to advance the economic welfare of the country, and to coordinate the public demand for efficient and adequate but prudent government. Chairman: John W. Hanes. Executive Secretary: Kenneth L. Pray. Headquarters: 2638 Sixteenth St. N.W., Washington 9, D.C.

City Managers' Association, The International, founded in 1914 to aid in the improvement of local government administration and to increase the proficiency of city managers. Membership: 900. President: J. R. French. Headquarters: 1813 East 60 Street, Chicago, Ill. Recent publications include *The Municipal Year Book 1945*, *Governmental Data for Small Council-Manager Cities*, *Planning for Postwar Municipal Services*, and *Monthly Administrative Reports for Cities*. Also publishes *Public Management*, a monthly journal; issues the "Municipal Management Series" consisting of eight practical manuals; and conducts in-service training courses and a management information service.

Civil Liberties Union, American, founded in 1920 to maintain the Bill of Rights for everybody, without exception. Membership: 6,000. Chairman of the National Committee: Prof. Edward A. Ross. Chairman of the Board of Directors: Rev. John Haynes Holmes. Director: Roger N. Baldwin. Headquarters: 170 Fifth Avenue, New York, N. Y. The Union continued during 1945 its intervention in court cases involving civil rights, in administrative

practices and rulings, and in legislation. Publications included the yearly report, *Liberty on the Home Front*, the *Civil Liberties Quarterly*, *Toward An International Bill of Rights*, and other pamphlets of current interest in civil liberties.

Civil Service Reform League, National, founded in 1881 to improve and extend the merit system in the public service. Membership, 8,000. President: Nicholas Kelley. Executive Secretary: H. Elliot Kaplan. Headquarters: 67 West 44th Street, New York 18, N.Y. In 1945 the League fought political interference with appointments in Federal war agencies, discouraged excessive expansion in Federal agencies. The sub-committees on Veteran Preference and on Demobilization and Reorganization of the Civil Service, of the League's National Committee on Post-War Civil Service Problems issued reports based on their studies of these problems. The sub-committee on Public Employer-Employee Relations carried on an intensive study preparatory to submission of its report. The League continues to give advisory services with respect to problems of administration, interpretation and enforcement of merit system laws to public personnel agencies and administrative officials.

Civitan International, nonprofit association of individual Civitan Clubs, now in its 26th year extending from Canada throughout the United States and to Mexico, whose purpose is best explained by the motto, Builders of Good Citizenship. Objectives are: (1) Building of good citizenship and promotion of international good will, (2) loyal support of our governments in peace and in war, (3) curbing of crime, (4) public safety and accident prevention, (5) fostering of all procedures designed to eliminate communicable diseases and improve the public health, (6) assistance to youth in all ways calculated to reduce juvenile delinquency and to inculcate in their practical incentives to be good citizens, and (7) rehabilitation of returning World War II veterans.

President: LeRoy D. Sauer, 42 North Main Street, Dayton 2, Ohio; President-Elect J. Edward Bailey, American Building, Richmond, Virginia; Immediate Past President: L. H. Gibson, 513 American Building, Nashville, Tennessee; Vice-Presidents: Oby T. Brewer, P. O. Box 1663, Atlanta, Georgia, and Oliver J. Swan, Hotel Tulsa, Tulsa, Oklahoma. Secretary: Rudolph T. Hubbard, 1525-27 Comer Building, Birmingham, Alabama. Treasurer: H. S. Strawn, 183 W. Fourth, Charlotte, North Carolina. Judge Advocate: William F. Parker, 810 Ingraham Building, Miami, Florida. Sgt.-At-Arms, Robert J. Ward, Watts Building, Birmingham, Alabama. Chaplain: Dr. Herbert Spauld, 528 Moravian Lane, Charlotte, North Carolina. Official publication, *The Civitan*, published monthly except July. Headquarters: 1525-27 Comer Building, Birmingham, Ala.

Common Council for American Unity, founded in 1919 to continue work begun by the U.S. Committee on Public Information; it became an independent organization in 1921, and its name was changed from Foreign Language Information Service to Common Council for American Unity in 1940. The purpose of the Council is to help create unity and mutual understanding among the American people; to overcome intolerance and discrimination because of foreign birth or descent, race or nationality, and to help the foreign-born and their children to solve their special problems of adjustment. Executive Director: Read Lewis. Headquarters: 20 West 40th Street, New York City. Publication: *Common Ground*, a quarterly magazine.

Composers and Conductors, The National Association for American, founded in 1933 by the late Henry Hadley to advance the interest of the American Composer and the American Conductor and to secure a hearing for serious works of merit. Leon Barzin, President. Membership in every state; headquarters, 15 West 67th St., New York City. The Association presents a series of six Sunday evening concerts at the Times Hall, 240 West 43rd Street during the season 1945-46, a series of afternoon musicales at the Henry Hadley Studio, 15 West 67th Street, and a concert at the Waldorf-Astoria. In addition to regular meetings there are conferences of member composers with Publishers, Radio and Recording representatives; and a series of Musical Films were shown, featuring scores by American composers, at the Museum of Modern Art. The Association includes in its activities the publication of scores by composer members and cooperates with the leading orchestras, broadcasting stations, recording companies and publishers in the promotion of American music. In 1944-45, reading rehearsals of American compositions were presented on Friday afternoons over Station W.N.Y.C. Prizes offered for compositions especially adapted to young musicians, consist of (a) Solo String with Orchestra; (b) Solo Wood Wind with Orchestra; (c) Solo brass or percussion with Orchestra—prizes of \$100.00 each, a broadcast performance publication and distribution.

The Henry Hadley Memorial Library, Curator, John Tasker Howard, housed in the American section of the Music Division of the New York Public Library at Fifth Avenue and Forty-second Street, contains a complete file of American works in the larger forms, available for examination by conductors and soloists. Various awards and citations are given annually by the Association for

outstanding service to American music. Among the recipients of the Henry Hadley medal, the highest award, are Mrs. Edward MacDowell, Dr. Howard Hanson and Gene Buck.

Composers, Inc., The League of, founded in 1923 to further the works by living composers of all nationalities, as well as to help composers by commissions for new works and general promotion of their compositions. Executive Chairman: Mrs. Arthur M. Reis. Headquarters: 180 West 56th Street, New York, N. Y. The League publishes a quarterly magazine, *Modern Music*, the only critical magazine in this country devoted to contemporary music. The League of Composers season includes concerta, opera and broadcasts, and commissions new works for other organizations. The League has laid particular emphasis on introducing young modern composers to a New York public, having commissioned sixty American composers during the past years. A group of young composers this season were elected to a Program Committee and will be in charge of the New York concerts. A work commissioned by the League for orchestra and voice will be written by Lukas Foss and will receive its first performance within the year.

Consumer-Retailer Council, Inc., National, founded in 1937 to enable consumers and retailers to work out together their mutual problems. Members: American Association of University Women, American Home Economics Association, National Board of the Young Women's Christian Associations, National Council of Jewish Women, American Retail Federation, National Association of Food Chains, National Retail Dry Goods Association, National Retail Furniture Association, Retail Credit Institute of America. Associate Members: National Better Business Bureau, Illinois Federation of Retail Associations, Pennsylvania Retailers' Association. Chairman: Theodore B. Griffith, Managing Director Roger Wolcott. Headquarters: 8 West 40th Street, New York City. The National Retail Furniture Association and the Retail Credit Institute of America joined the Council during the year. The number of retail subscribers also increased substantially. New publications issued during 1945 include *A Study of Labeling, Suggestions on How to Set Up a Local Consumer-Retailer Council, Building Sound Consumer-Business Relations. The Eighth Annual Report*. Other publications include *How Informative Labels Help You Stretch Your Dollars, Looking at Clothing and Textile Labels, Federal and State Laws Affecting Labeling and The Grade Labeling of Canned Fruits and Vegetables*. The *NCRC News* is published monthly. High schools, colleges and State departments of education located in the 48 States, the District of Columbia, Hawaii, Puerto Rico and Canada, requested Council publications during the year. In comparison with the previous year, the number of high schools using Council material increased 15 per cent.

Consumers League, National, founded in 1899 to awaken consumer responsibility for conditions under which goods are made and distributed, and through investigation, education, and legislation to promote fair labor standards; this includes State and Federal minimum wage laws, child labor legislation, social security measures, limitation of hours of work for women, proper enforcement of labor laws. Membership: 15,000, including State and National Leagues. President: Alice Hamilton, M.D.; Chairman of the Board: Everett Moore Baker. Headquarters: 348 Engineers Bldg., Cleveland 14, Ohio.

Consumers' Research, Inc., founded as the Consumers' Club in 1927 and incorporated in 1929 to provide unbiased information and counsel on goods bought by the ultimate consumer. Number of subscribers: 50,000. President and Technical Director: F. J. Schlink. Secretary: Clark C. Willever. Headquarters: Washington, N. J. The monthly issues of *Consumers' Research Bulletin* (and an annual cumulative issue of about 200 pages) present the findings of CR's tests on washing machines, refrigerators, vacuum cleaners, and many other new electrical appliances, rating them by brand name as *Recommended*, *Intermediate*, or *Not Recommended* on the basis of comparative performance. In addition, there are numerous discussions of the outstanding features of the 1946 automobiles, of important matters connected with the design and equipment of the home, as well as analyses of a wide range of household cleaning preparations and detergents. Monthly features are a "Consumers' Observation Post" and ratings of motion pictures and phonograph records.

Consumer's Union of United States, Inc., founded in 1936 as a nonprofit research agency which carries on both technical and economic studies, the results of which are published in the monthly *Consumer Reports* and the weekly *Bread & Butter*, to provide guidance for ultimate consumers. Membership: 100,000. President: Colston E. Warne. Editor: Madeline Ross. Secretary: Harold Aaron. Director: Arthur Kallet. Headquarters: 17 Union Square West, New York, N. Y. Consumer's Union is testing and reporting on new electrical and mechanical products—including radios, automobiles, refrigerators, vacuum cleaners, washing machines, pressure cookers, etc.—in addition to its usual reports on foods, textiles, drugs, cosmetics and other consumer goods. In addition, it is featuring articles on health and medicine.

Cooperative League of the U.S.A., The, founded in 1916 as a national educational federation of consumer cooperatives devoted to the extension of the consumer cooperative owned business enterprises. Membership: 1,500,000 in 22 affiliated regional and national associations. President: Murray D. Lincoln. General Secretary: E. R. Bowen. Headquarters: 843 South Dearborn, Chicago 4; 726 Jackson Place, N.W., Washington 6, D.C.; 167 West 12 St., New York City 11. The 14th Biennial Congress of The Cooperative League reported that there were two and a half million American families who are members of consumer and purchasing cooperatives, doing a business estimated at \$800,000,000. The cooperatives are growing fast, the League declared, but war conditions have brought serious problems. At the close of 1944 more than 150 mills, factories, and oil refineries were owned by the co-ops producing goods for distributors through wholesale and retail cooperatives.

Cotton Manufacturers, National Association of, founded in 1854 for service to cotton mills and rayon weaving mills in the northeastern section of the United States. Membership: about 450. President: Russell T. Fisher. Headquarters: 80 Federal Street, Boston, Mass. Student Honor Medals awarded in various textile schools annually.

Credit Men, National Association of, founded in 1896 as a nonprofit making organization of manufacturers, wholesalers, and bankers affiliated for the promotion of wholesome business by maintaining a sound credit structure. Membership: 23,000. President: Robert L. Simpson. Executive Manager: Henry H. Heumann. Headquarters: One Park Avenue, New York City 16.

Credit Union National Association, Inc., founded 1934 to organize and service the credit unions in the United States and Canada. Membership: 53 Leagues serving 4,000,000 members. President: R. A. West, Managing Director, Thomas W. Doug. Headquarters: 1342 East Washington Avenue, Madison, Wisconsin. Canadian credit unions were accepted to membership in 1940, and the Leagues include eight in Canada. The eleventh annual meeting will be held in May, 1946.

Daughters of the American Revolution, National Society of, founded in 1890 for historical, educational and patriotic purposes. Membership in 1945, about 145,000 members in 2,570 chapters. Mrs. Julius Y. Talmadge, President General, Administration Bldg., 1720 D Street, N.W., Washington, D.C.

Society's headquarters are located in Washington, D.C., comprising one city block, including Memorial Continental Hall, a building of state rooms with auditorium seating 1600; Administration Building, housing Society's offices; and Constitution Hall, an auditorium seating 4,000—acclaimed concert hall of the city.

Society's record of War Work: From D.A.R. War Fund—collected from voluntary contributions by members during period of war. Over \$400,000.00 expended from this fund, through the American Red Cross, for the purchase of equipment for the Blood Plasma Program, i.e. 88 Mobile Blood Plasma Units, located in various cities; 18 stationary Blood Donor Centers, located in cities throughout the United States; Station Wagons, Sedans, Trucks, Canteens, Sterilizer, Heater and Equipment.

For the U.S. Army—Wired Program Distribution System at Vaughan General Hospital at Hines, Ill., \$61,200.00; 5 station, individual selective head-set equipment, for 2,500 bed patients.

For the U.S. Navy—3 Mobile Photo-fluorographic Units (auto trailer) for U.S. Navy Medical Corps, 7 portable X-Ray units for hospital ships; 3 field ambulances; \$56,682.00.

For the U.S. Public Health Service Hospitals—33 Mills Sono-Vision Projectors (Portable Motion Picture Machines) at \$570 each—\$18,810.00.

Steel encased Hammond Electric Organ for Aircraft Carrier, \$1,500.00; triptychs (art altar pieces for Armed Forces) \$2,000.00; metal body locaters—28, purchased by Junior D.A.R.—\$9,800.00.

In addition, as war work: War Bonds and stamps subscribed, \$156,804,848.99; Buddy Bags made for servicemen 40,000; L.C.I.—82 ships sponsored by Society; Post War Employment program launched for personnel of L.C.I. Ships.

The Society has 24 active national committees covering patriotic, educational and historical fields. Most important among these is the Approved Schools program, to which \$77,640.00 was subscribed in 1945, whereby 14 mountain schools are assisted by D.A.R. funds. Two of these schools in the southern mountains are entirely owned and operated by the D.A.R.

Patriotic education for better citizenship is furthered by the Society in aiding underprivileged youths of all races, creeds and color. The Junior American Citizens Clubs, Girl Home Makers, Good Citizenship Pilgrims, and the mountain schools as mentioned above, are all examples.

The D.A.R. Manual for Citizenship, first published in 1921, printed in English and translated in 17 other languages, has been widely distributed. To date over 7,000,000 copies have been distributed to new citizens.

The principal historic project at present is the Society's undertaking to finance the building of the Bell Tower to house the Bells of the great carillon at Valley Forge, Pa. This tower is being subscribed by donations from members by recording names on metal plates to be placed in the Tower of all American patriots, from the American Revolutionary War, through and including World Wars I and II.

Official publications of the Society, namely, the *National Defense News* and the *National Historical Magazine*, bring these activities and others to the attention of members and friends.

Daughters of Union Veterans Of The Civil War, 1861-1865, Inc., organized in 1885 to perpetuate the memory and loyalty of their fathers. It is affiliated with the Grand Army of the Republic and kindred orders; the Women's Patriotic Conference on National Defense; and the Women's Interests Section, Public Relations, War Department. During the past year, ending Oct. 1, the National organization gave \$1,900.00 to the Grand Army of the Republic; added \$425.00 to their Scholarship Fund at Lincoln Memorial University; and sent \$11,000.00 to the American Red Cross for Clubmobile Service Fund. In addition, members contributed to State and local defense projects, educational scholarships and Red Cross activities. The National President elected October 3, 1945, is Mrs. Emma R. McLaughlin, 2147 Marshall Ave., Elm Grove, West Virginia. The organization owns its Headquarters, 1826 18th St., N.W., Washington, D.C., which is the permanent residence of the National Treasurer. Present membership, 35,000.

Democracy, Council for, founded in August, 1940; a social action group for the defense and extension of democracy. Chairman, Board of Directors, Raymond Swing; President, Ernest Angell; Executive Director, James E. Greer; Assistant Director, Warren Brown. National Board of Directors (150 members). Headquarters: 11 West 42nd Street, New York City. A non-political, non-partisan group, the Council's aim is to stimulate citizen participation in action to meet the issues of democracy. It uses radio, visual aids, news releases, pamphlets, speakers and a semi-monthly bulletin to achieve this purpose. It specializes in program planning for and assistance to already organized groups.

Democratic Action, Union for, founded May 10, 1941, to carry on a two-front fight for democracy, at home and abroad, to oppose totalitarianism in all forms, to organize American liberals to give progressive meaning to the sacrifices made in the war against fascism. Membership 10,000. Chairman: Dr. Reinhold Niebuhr, National Director, James Loeb, Jr., Headquarters, 819 13 St. N.W., Washington, D.C.

Dental Association, American, founded in 1859 for educational purposes. Membership: about 60,000. President: Walter H. Scherer. General Secretary: Harry B. Pinney. Headquarters: 222 East Superior Street, Chicago, Illinois. The 1944 meeting was held in Chicago, Illinois. See DENTISTRY.

Dietetic Association, The American, founded in 1917. Its objective is to improve the nutritional status of human beings, to bring about closer cooperation among dietitians and between dietitians and workers in allied fields, and to improve conditions and raise the standards of dietary work. Membership: 7,500. President: Mrs. Bessie Brooks West. Executive Secretary: Gladys E. Hall. Headquarters: 620 North Michigan Avenue, Chicago 11, Illinois.

Documentation Institute, The American, founded in 1937 for the promotion and development of documentation in scholarly and scientific fields. The Institute was organized as a nonprofit corporation, with members nominated by scholarly and scientific agencies. President: Watson Davis Secretary: Helen M. Davis. Headquarters: Science Service Building, 1719 N Street, N.W., Washington 6, D.C. The annual meetings are scheduled for Jan. 31, 1946, and Jan. 30, 1947, in Washington, D.C.

Dogs for Defense, Inc., founded in January, 1942, for the procurement of dogs for the Armed Forces of the United States. President, H. I. Caesar; Secretary, Mrs. Wm. H. Long, Jr. Headquarters: 22 East 60th Street, New York City 22. Since its inception the organization has delivered, without expense, thousands of dogs to the Armed Forces and is now assisting in the replacement of surplus dogs.

Eagles, Fraternal Order of, a fraternal and beneficial Order founded in 1898. Membership, 1,000,000. Grand Worthy President: Edward F. Post. Managing Organizer: M. L. Brown. Chief Auditor: John A. Abel. Financial Advisor: E. J. Balsiger. Grand Secretary: Chas. C. Guenther. Headquarters: Kansas City, Missouri. The Order has 150,000 members in Military Service, with 1272 subordinate units purchasing \$27,000,000 in War Bonds.

East and West Association, The, organized in 1941, and devoted to new and better understanding between peoples through mutual knowledge. President: Pearl S. Buck. Secretary: Albert H. Walsh. Headquarters: 40 East 49 Street, New York City. During 1945, the Association arranged and conducted forums and courses on the peoples of the world in New York, Philadelphia, Springfield (Mass.), Detroit, Chicago, Boston, South Bend, etc. It

has also arranged special institutes for librarians and teachers. It continues to publish study outlines, picture portfolios about various peoples and reading lists. It has introduced a new character, Johnny Everyman, into regularly appearing comic books. A new dramatic unit which tours the country, the Living Chinese Theatre, has been established. The Open Door, sponsored by forty ministers and rabbis, mediates cases of discrimination arising from race, color or religion.

Economic Association, American, founded in 1885 to encourage research, thought and discussion, and issue publications. Membership: 4,159 members; 1,754 subscribers. President: I. L. Sharfman. Managing Editor of *American Economic Review*: Paul T. Homan. Secretary-Treasurer and Editor of *Proceedings*: James Washington Bell. Headquarters: Northwestern University, Evanston, Ill. Chief papers for the annual meeting in January, 1946, Cleveland, O., published in *Proceedings*, deal with the problem of "full employment," American economy in the interwar period, postwar labor relations, monetary policy, changing structure of the American economy, problems of foreign areas, new frontiers in economic thought, postwar shipping policy, monopoly and competition, postwar railroad problems, international investment, recent developments in public utility regulation, international cartels. A quarterly journal, the *American Economic Review* covers a wide range of economic subjects of vital and current importance. A Directory, with annual supplements, contains a special-purpose, "who's who" account of members, together with classification by fields of subject matter and geographical location. An information booklet is also published. The Association is affiliated with the American Council of Learned Societies and the Social Science Research Council.

Economic Development, Committee for, an independent, nonpolitical, nonprofit corporation organized by American businessmen in 1942 to help commerce and industry make its maximum contribution towards maintaining high levels of productivity and employment in the postwar period. To carry forward this objective two divisions have been organized: (1) the Field Development Division (Marion B. Folsom, Chairman) which is to stimulate and encourage company-by-company planning in communities throughout the nation, and (2) the Research Division (Ralph E. Flanders, Chairman) which has initiated studies into the broad problems of government and business, seeking to establish those principles needed in the creation of "climate" favorable to business expansion. There are at present 2,200 community committees. It is estimated that between 40 and 50 thousand business men are cooperating with the work of the C.E.D. Chairman of the Board of Trustees: Paul G. Hoffman. Executive Director: C. Scott Fletcher. Director of Information: P. D. Fahnestock. Headquarters: 285 Madison Ave., New York 17, N.Y. See *TAXATION* under *Postwar*.

Economic Entomologists, American Association of, founded in 1889 to promote the study and to advance the science of entomology, and to publish the *Journal of Economic Entomology*, etc. Membership: 1,751. President: D. L. Van Dine. Secretary: Ernest N. Cory. Headquarters: College Park, Md. The 1945 meeting was held in Dallas, Texas.

Economic Research, Inc., National Bureau of, founded in 1920 to encourage investigation, research and discovery, and the application of knowledge to the well-being of mankind; and in particular to conduct exact and impartial investigations in the field of economic, social, and industrial science. Membership: 27 members of the Board of Directors. President: Shepard Morgan. Executive Director: William J. Carson. Director of Research, Arthur F. Buris. Headquarters: 1819 Broadway, New York, N. Y. Seven publications were issued in 1945 dealing with production and productivity, national income, capital formation, business financing, business cycles, etc.

Education, American Council on, a council of national educational associations, organizations having related interests, approved educational institutions, State departments of education, and city school systems; founded in 1918 as a center of cooperation and coordination in the field of education. Membership: 840 organizations and institutions. President: George F. Zook. Chairman: Alexander J. Stoddard. Headquarters: 744 Jackson Place, Washington 6, D.C. The Council acts as liaison agency between educational institutions and the government, and as a clearing house for information and the exchange of opinion. Since the cessation of hostilities it has inaugurated several postwar projects for the expansion of educational facilities and the improvement of educational programs. The Council publishes reports of its research projects, other monographs, psychological tests, and a quarterly journal, *The Educational Record*.

Education Association of the United States, National (N.E.A.), founded in 1857 to advance the interests of the teaching profession, promote the welfare of children, and foster the education of all the people. Membership: 851,605. President: Mr. F. L. Schagle. Executive Secretary: Willard E. Givens. Headquarters: 1201 Sixteenth Street, N.W., Washington 6, D.C. See *EDUCATION*.

Education Fellowship, American (formerly *Progressive Education Association*), incorporated in 1944 to develop

and promote progressive principles of education through local chapter organizations, field conferences, preparation and distribution of educational materials, a Service Center for members, and publication of a journal, *Progressive Education*. Membership: about 8,000. Director: Vinal H. Tibbetta. Headquarters: 289 Fourth Avenue, New York City 10. See *EDUCATION*.

Education-Recreation Council, National, a conference body of national agencies associated for the purpose of exchanging information and studying common problems, founded in 1933. Membership: 24 private and 11 Federal agencies. Chairman: Miss Norma J. Sims. Vice-Chairman: G. Ott Romney. Secretary: E. Urner Goodman.

Electrical Engineers, American Institute of, founded in 1884 for the advancement of the theory and practice of electrical engineering and allied arts and sciences, and maintenance of high professional standing among its members. Membership: 24,500. President: W. E. Wickenden. Secretary: H. H. Henline. Headquarters: 88 West 39th Street, New York City. 1946 conventions. New York City, January 21-25; Detroit, Mich., June 24-28; Seattle, Wash., during week of August 26-30. 1946 District Meetings: Buffalo, N.Y., Asheville, N.C., San Antonio, Tex., and Fort Wayne, Ind.

Elks, Benevolent and Protective Order of, a fraternal organization founded in 1868. Membership: 750,000. Grand Exalted Ruler: Wade H. Kepner; Grand Secretary: J. E. Masters. Headquarters: Elks National Memorial Building, Chicago, Ill. A National War Commission is working out detailed plans for the rehabilitation of veterans. The Order maintains at Bedford, Va., a home for aged and indigent members. An Elks National Foundation Fund aids crippled children, tubercular patients, and grants scholarships. Expenditures for charitable and welfare purposes, exclusive of war bonds and funds for the use of the War Commission, amounted to almost \$4,000,000 in 1945. The national journal is *The Elks Magazine*.

English Institute, The, founded in 1939 to afford an opportunity for mature scholars in the field of English to meet together in a series of informal conferences to discuss questions of literary and philological research. Chairman: Ernest Hunter Wright. Secretary: James L. Clifford. Barnard College, Columbia University, New York. Selected papers read at the sessions are published in the *English Institute Annual*. The next session will be held at Columbia University, September 9-13, 1946.

English-Speaking Union of the United States, founded in 1920 to draw together in the bond of comradeship the English-speaking people of the world. It cooperates with the English-Speaking Union of the British Empire, Dartmouth House, London. Membership: about 15,000. Headquarters: 19 East 54th Street, New York City. President: James R. Angell. Chairman: Henry J. Fisher. Treasurer: Charles A. Wight. General Secretary: Mrs. W. Henry France.

Ethnological Society, American, founded in 1842. The Society meets regularly at the American Museum of Natural History for lectures and discussions of scientific work and problems in anthropology. It publishes a monograph series of anthropological and linguistic researches. Membership: 252. President: Marian W. Smith. Secretary: Esther S. Goldfrank. Columbia University, New York City. See *SMITHSONIAN INSTITUTION*.

Eugenics Society, Inc., American, founded in 1926 to promote education and social action relating to eugenics. Membership: 500. President and acting executive officer: Dr. Maurice A. Bigelow. Secretary: Chauncey Belknap. Headquarters: 1790 Broadway, New York 19, N.Y.

Exchange Club, The National, founded in 1911 for the purpose of educating, improving, and developing the capabilities of the members of the clubs chartered by this corporation and of the citizens of the communities, municipalities, and states in which such clubs are chartered. Membership: 40,000. National President: Dr. Stewart W. McClelland. National Secretary: Herold M. Harter. Headquarters: 335 Superior Street, Toledo, Ohio. As an educational service, the Club publishes an official, monthly publication, *The Exchange*. This magazine reaches the individual members of all Exchange Clubs and carries material that is used by Exchange Clubs locally in presenting the general educational program to the public.

Farm Bureau Federation, American, organized in 1920 to meet and solve the pressing economic problems of agriculture. Membership: 900,000. President: Edward A. O'Neal. Secretary-Treasurer: R. B. Corbett. Headquarters: 58 East Washington, Chicago, Ill. Since its inception, the Federation has labored to further such projects as adequate farm prices, better farm-to-market roads; adequate credit facilities; freedom of competition among transportation agencies; solution of problems of irrigation; adequate appropriations for the Forest Service; development of rural youth programs.

Farm Chemurgic Council, National, organized in 1934, to advance the industrial use of American farm products through applied science. Membership: 4,000. President: Wheeler McMillen. Secretary: Ernest L. Little. Headquarters: 50 West Broad Tower, Columbus, Ohio. Eastern Office 350 Fifth Ave., N.Y.C. Southwestern Office,

Chamber of Commerce Bldg., Oklahoma City, Oklahoma. The Council has scheduled many meetings for 1946.

Farmers' Cooperatives, National Council of, founded in 1929 to serve, represent, and coordinate, nationally, the program and efforts of farmers' cooperative purchasing and marketing associations. Membership: 4,600 associations. President: Homer L. Brinkley. Executive Secretary: John H. Davis. Headquarters, 1731 Eye Street, N.W., Washington 6, D.C. The regular meeting of Council delegates from all parts of the nation will be held in Chicago, Jan. 7-11, 1946.

Farmers' Educational and Cooperative Union of America, founded in 1902, and generally known as the National Farmers Union, is devoted to assuring security of farm families on the land, in an economy of abundance brought about by a free exchange of goods and services. Farmers' Union works in the fields of education, legislation, and cooperatives to improve the position of family farmers. Membership: 165,000. President: James G. Patton. Vice-president: Herb Rolph. Secretary-Treasurer: Emil Loriks. Headquarters: 3501 E. 46th Avenue, Denver, Colorado.

Federal Union, Inc., founded 1939, was incorporated in 1940 as a non-profit educational membership association to promote "education in the basic principles of federal union as exemplified in the Constitution of the United States with a view to attaining world order by a federal union of democratic peoples." President: Clarence K. Streit. Secretary: Brice Toole. Headquarters: 700 Ninth St. N.W., Washington 1, D.C. The association at its fifth annual national convention, Pittsburgh, Pa., Nov. 16-18, 1945, decided to concentrate in 1946 on the publication of a new monthly journal of opinion and discussion to be edited by Mr. Streit. It will be a clearing-house, among other things, for all important developments in thought and action throughout the world in the problem of securing liberty and peace in the atomic age through world government. The U.S. Treasury has ruled that contributions to Federal Union are deductible from taxable income, because of the educational character of its activity.

Field Service, American, a volunteer ambulance service on active duty with Allied troops overseas, with men and vehicles evacuating battle wounded in the Italian, French, and Burma theaters. Enlistments are open to men in limited service classifications of Selective Service. The American Field Service was originally organized at the start of World War I and served throughout that conflict with the French Armies. In 1939 the ambulance service was actively reorganized. The renewed Service was sent to France where it served until the German occupation. In 1941, in answer to a request from General Wavell, the volunteer ambulance corps was assigned to British forces in the Middle East, where it was attached to Montgomery's Eighth Army and fighting French forces. As a result of the work done by the AFS in the Desert campaign, a contingent was assigned to British and Indian forces at the Burma front in 1943. During 1944 they served in the Imphal sector and along the Tiddim and Tamu roads. Following the invasion of Italy, the units which had served in the Middle East were transferred to Italy and attached to the Eighth and Fifth Armies. They served there in every major engagement including the battle of Cassino and throughout the Anzio beachhead operations. During 1944 another new unit was formed and is now serving with the French Army in France. Headquarters: 60 Beaver Street, New York, N.Y.

January, 1945, one AFS Ambulance Car Company was transferred from the Italian theater to operate under the command of Montgomery's 21 Army Group in Holland and Germany. They were among the first units into Belsen Concentration Camp and worked there until its final destruction by Allied-set fire. The AFS French units participated in Southern France and Vosges/Alsace campaigns, crossing the Rhine into Germany with the First French Army. The Burma units operated throughout that entire campaign through victory at Rangoon. They continued their work until repatriation to the States in November 1945. A member of this unit was awarded the George Medal, highest honor accorded by the King to a non-British civilian. In World War II the American Field Service suffered a casualty rate of 14%, and has been honored by every division and army they've served including the U.S. 5th Army. AFS is to continue on as a peacetime organization. After World War I it instituted a program of French-American exchange scholarship, and again this program is to be carried on. This time it is expected the scholarship will include men of all Allied nations that AFS has served.

Fire Protection Association, National, founded in 1896 to promote the science and improve the methods of fire protection and prevention, to obtain and circulate information, and to secure the cooperation of its members in establishing safeguards against fire loss. Membership: 10,262. President: Richard E. Verner. General Manager: Percy Bugbee. Headquarters: 60 Battery March Street, Boston, Mass. See FIRE PROTECTION.

Fire Underwriters, National Board of, an educational, factual, and engineering organization founded in 1866 and supported by the capital stock fire insurance business. Membership: 208. President: F. A. Christensen. General

Manager: W. E. Mallalieu. Headquarters: 85 John Street, New York City. The 1946 meeting will be held May 23 in New York City.

Food Technologists, The Institute of, established in 1939 to provide a professional organization which will facilitate interchange of ideas, stimulate and promulgate the results of research and work in the application of science to the food industry, and encourage the development of food technology as a profession. Membership: about 2,000. President: F. W. Tanner. Secretary-Treasurer: George J. Hucker. Geneva, New York. Regional sections have been granted charters in Southern California, Northern California, New England, St. Louis, New York, Florida, Great Lakes, Western New York and Chicago.

Foreign Policy Association, Inc., founded in 1918 to carry on research and educational activities to aid in the understanding and constructive development of American foreign policy. Membership: 30,000. President: Frank Ross McCoy. Secretary: Dorothy F. Leet. Headquarters: 22 East 38 Street, New York City. The Association publishes a weekly *Bulletin* including the Washington News Letter; semi-monthly *Foreign Policy Reports*, and *Headline Series*. The annual meeting was held in December, 1945. Discussion luncheons are scheduled periodically at the Waldorf-Astoria, New York City, and in thirty-two branch cities.

Foreign Relations, Inc., Council on, a nonpartisan, non-commercial research organization, founded in 1917 to study the international aspects of America's political, economic, and financial problems. Membership: 650. President: Russell C. Leffingwell. Vice Presidents: Isaiah Bowman and Allen W. Dulles. Executive Director: Walter H. Mallory. Headquarters: 58 East 68th Street, New York City. The Council holds meetings and conferences, and maintains a reference library on international affairs. It carries on a program of research and publishes: a quarterly review, *Foreign Affairs*, two annuals, *The United States in World Affairs* and *The Political Handbook of the World*; and individual volumes on international questions. In 1944 the Council acquired its new headquarters, known as the Harold Pratt House, at the corner of Park Avenue and 68th Street. It was formally opened by Secretary of State Stettinius on April 6th, 1945.

Foresters, Society of American, founded in 1900 to represent, advance, and protect the interests and standards of the profession of forestry and to provide a medium for the exchange of professional thought. Membership: 4,708. President: Dr. Henry Schmitz. Executive Secretary: Henry E. Clepper. Headquarters: Mills Building, Washington, D.C.

Forestry Association, The American, founded in 1875, is a citizens' organization for the advancement of intelligent management and use of the country's forests and their related resources of soil, water, wildlife, and outdoor recreation. Membership: 15,000. President: W. S. Rosecrans. Executive Director: Ovid Butler. Headquarters: 819 Seventeenth Street, Washington 6, D.C. In addition to the publication of a monthly magazine, *American Forester*, the Association carries on educational projects in various fields.

Foster Parents' Plan for War Children, Inc., founded in 1936 to help children of all nationalities suffering as a result of war. Executive Chairman: Edna Blue. Secretary-Treasurer: Ann Landross. Director, Public Relations: Robert Yaller. Executive Secretary: Eric G. Mugginger. Deputy: Mrs. Ivy Mason. British headquarters: 95 Coleman Street, Wool Exchange, London EC 4, England. American headquarters: 55 West 42nd Street, New York City. The Plan operates 56 projects in England, France, Malta, Italy, Belgium and Holland, schools for farmers, nurses and social workers, as well as hostels for children of all nationalities—Polish, Czech, French, Dutch, Belgian, Spanish, Austrian, Norwegian, German, Italian, Maltese and British.

Fraternal Congress of America, National, founded in Washington, D.C., November 16, 1886, to unite all fraternal benefit societies of America for mutual improvement and concert of action. Membership: 105 societies. President: Walter C. Below. Secretary-Treasurer and Manager: Foster F. Farrell. Headquarters: 35 East Wacker Drive, Chicago 1, Ill. The 1946 meeting will be held in September.

Friends Service Committee, American, founded in 1917, and representing the Religious Society of Friends in fields of social action, engaging in both domestic and foreign projects to express the Quaker principle that constructive and nonviolent service can resolve conflicts. Honorary Chairman: Rufus M. Jones. Chairman: Henry J. Cadbury. Executive Secretary: Clarence E. Pickett. Headquarters: 20 South 12th Street, Philadelphia 7, Pennsylvania. Public Committee meetings are held monthly in principal cities.

Future Farmers of America (F.F.A.), founded November, 1928, as national organization of, by, and for farm boys studying vocational agriculture in public secondary schools. Primary aim, development of agricultural leadership, cooperation, and citizenship. Specific purposes intend to strengthen confidence of farm boys and young men in their work; create and nurture a love of country

life and intelligent choice of farming occupations; improve the rural home; encourage thrift, scholarship, and organized rural recreation. Membership: 195,253 in 6,030 local chapters of 47 States, Hawaii, and Puerto Rico. President: J. Glyndon Stuff. National Executive Secretary: A. W. Tenney. Headquarters: U. S. Office of Education, Washington 25, D. C. During 1945, Star Farmer of America was Gordon John Eichhorn, Marion, Ohio. Champion public speaker was David Elk, Eden, New York. Gold emblem chapters were Talbotton-Woodland, Georgia; Byron, Illinois; Chenoa, Illinois; Lafayette-Bryan Station, Kentucky; Alma, Michigan; Flathead, Montana; Neligh, Nebraska; Shawnee, Oklahoma; Albany, Oregon; Alpine, Texas; Hurricane, West Virginia; and Unida, West Virginia. The National Convention for 1946 was scheduled for October in Kansas City, Mo.

Garden Club of America, founded in 1913. Membership: about 8,000. Corresponding Secretary: Mrs. Henry C. Taylor. Headquarters: 598 Madison Avenue, New York City 22.

Gas Association, American, founded in 1918 by holding companies, service companies, gas operating companies, manufacturers of gas appliances and equipment, and individuals. Membership: 5,000. President: E. J. Boothby. Managing Director: H. Carl Wolf. Secretary: Kurwin R. Boyes. Headquarters: 420 Lexington Avenue, New York City 17.

Geographic Society, The National, founded in 1888 for the increase and diffusion of geographic knowledge. Membership: 1,300,000. President: Gilbert Grosvenor. Vice President: John Oliver La Gorce. Secretary: Thomas W. McKnew. Treasurer: Robert V. Fleming. Headquarters: 1146 Sixteenth Street, N. W., Washington 6, D. C. In fulfilling its aim to diffuse geographic knowledge the Society relies chiefly on its official publication, the monthly illustrated *National Geographic Magazine*, which is sent to every member. During 1945 the Society continued its study of North American birds in their Canadian nesting areas under the leadership of Dr. Arthur A. Allen. The investigations were carried out along the north shore of the Gulf of St. Lawrence (Quebec Province) and on nearby islands which have been set apart as bird sanctuaries. Natural color photographs were made of auks, murrelets, puffins, cormorants, eiders and Red-Throated Loons. The seventh archeological expedition of the Society and the Smithsonian Institution to southern Mexico worked during 1945 in the highlands of the State of Chiapas near Tuxtla Gutierrez. Under the leadership of Dr. Matthew W. Stirling the party excavated eight mounds, uncovering a temple and burial urns containing bones of sacrificed infants. Work toward the solution of problems of the aurora, under study in recent years by the Society and Cornell University, was continued during the year and directed by Dr. C. W. Gartlein. Automatic photoelectric recording instruments were developed and used for the first time to obtain information about auroral displays hidden from the eyes of observers by heavy clouds. Four 10-color wall maps issued as supplements to the *National Geographic Magazine* were prepared during 1945. A map of the Northeastern United States containing the greatest number of place names to appear on any chart published by the Society (10,437) covered the area in North America supporting the heaviest population and embracing the greatest factory activity. It included a portion of southeastern Canada. Three other similar wall maps charted areas of special significance in the closing days of World War II: the Philippine Islands, China, and Japan and Korea. Franklin L. Burr prizes were awarded by the Society to Dr. Lyman J. Briggs for outstanding work in directing field expeditions; and to Dr. Thomas A. Jagger for developing the first "duck" or amphibian mobile boat in 1927—a combination beach automobile and boat used in explorations near Pavlov Volcano in Alaska. The *Geographic News Bulletins* supplying background information about places and regions appearing in the news, especially in regard to postwar changes and adjustments, were distributed to more than 500 daily newspapers and approximately 200 radio stations. A series of feature stories with maps describing disputed areas in Europe was also furnished to 175 Sunday newspapers. *Geographic School Bulletins* embodying material similar to that in the *News Bulletins* were supplied weekly to more than 35,000 classrooms.

Geographical Society, American, a research institution founded in 1852. Membership: 4,766. President: Roland L. Redmond. Director: John K. Wright. Headquarters: Broadway at 156 Street, New York City. Most recent publications of the Society are: *Japan: A Geographical View* by Guy-Harold Smith and Dorothy Good with the collaboration of Shannon McCune; *Pioneer Settlement in the Asiatic Tropics: Studies in Land Utilization and Agricultural Colonization* by Karl J. Pelzer; the 107th and last sheet of the *Map of Hispanic America*, 1:1,000,000 was issued this year. See Cartography.

Gileads, The International (The Christian Commercial Men's Association of America), founded in 1899 to advance the placing of Bibles in hotels, hospitals, penal institutions, and public schools and has already placed two and a half million Bibles. Membership: about 16,500. President: Rev. H. Muller. Secretary: Nellie F. Dewar. Head-

quarters: 202 South State Street, Chicago. The organization has distributed nearly 9½ million Testaments to the armed forces.

Girl Scouts, Inc., founded in 1912 to help girls develop as good citizens and resourceful people through group self-government and activities in the following fields: homemaking, arts, and crafts, nature, the out-of-doors, literature and dramatics, community life, international friendship, sports and games, health and safety, music and dancing, and vocational exploration. Membership: 1,178,507. President: Mrs. Alan H. Means. National Director: Mrs. Paul Rittenhouse. Headquarters: 155 East 44th Street, New York 17. N. Y. Girl Scout Anniversary Week was celebrated Mar. 12-18, and Girl Scout Week, Oct. 28 to Nov. 8, 1945. Not only in the United States but around the world, war brought increased membership to the Girl Scouts. In spite of being banned in occupied countries, Scout membership doubled and Scouts paraded in Paris and Athens soon after liberation. From Sept. 8, 1944, to Aug. 31, 1945, Girl Scouts of the United States contributed \$63,508.03 to the Juliette Low World Friendship Fund to aid young people abroad and to finance training sessions for leaders from Europe, Asia, and the Americas. All Girl Scouts of the United States had an opportunity to help make the national plan of work and recommended more study of their own communities and intensive work for world understanding. The plan was presented to Mrs. Harry S. Truman, Girl Scout honorary president on Oct. 29, Citizenship Day in Girl Scout Week. Girl Scouts carried their projects in the growing and conservation of food a step further by inviting other youth agencies to join with them in observing a national Share the Food Day to call the nation's attention to the food needs of liberated countries. Mrs. Franklin D. Roosevelt was chairman of the national committee with the joint sponsorship of Girl Scouts, Girl Reserves, Camp Fire Girls, National Federation of Settlements, and National Jewish Welfare Board. Girl Scouts continued to meet the need for many projects such as aid to day nurseries, service to hospitals, and community wide planning boards made up of young people. Wing Scouting continued its expansion by accepting the first of three Piper Cub training planes to be presented annually.

Grange, The National, an Order formed in 1867 to give to the American farmer better social and educational opportunities, economic betterment, and higher spiritual and patriotic idealism; active in cooperative work and in State and National Legislation. Membership: 800,000 in 8,000 subordinate Granges. Master Albert S. Goss. Secretary Harry A. Caton. Headquarters: 744 Jackson Place, N. W., Washington 6, D. C.

Hadassah (The Women's Zionist Organization of America, Inc.) founded in 1912 to foster Zionist ideals in America and to conduct hospitalization, public health, child welfare, land reclamation and youth refugee work in Palestine. Official American representative of Youth Aliyah Movement. Senior membership, 165,000; Junior, 25,000. President, Mrs. Moses P. Epstein, Executive Secretary, Miss J. N. Leibel. Headquarters, 1819 Broadway, New York. During the war Hadassah Medical Center, Mt. Scopus, Jerusalem, was headquarters for wide cooperation program with Allied and American medical authorities. Organization conducts program for democratic action through education among its members in this country. A 250 bed tuberculosis hospital and an undergraduate medical school (joint sponsorship by Hadassah and the American Friends of the Hebrew University) are the newest projects. In addition to the Medical Center, the group runs 50 child welfare stations, 35 playgrounds, feeds 30,000 children daily, conducts the Louis D. Brandeis Vocational Center and provides funds for education and maintenance of Youth Aliyah children. Newest land project is a village for returning soldiers in Palestine.

Health Council, National, founded in 1921 to consolidate and correlate the activities of the member agencies and other activities for the betterment of health. Membership: 21 member agencies. President: Eleanor Brown Merrill. Secretary: Prof. Maurice A. Bigelow. Headquarters: 1790 Broadway, New York, N. Y. The annual meeting is held in January or February of each year. The outstanding activity of 1945 was the publishing of the Gunn-Platt Report of the Study of Voluntary Health Agencies, in conjunction with the Rockefeller Foundation.

Henry George School of Social Science, founded in 1898 to teach fundamental economics and social philosophy. Hundreds of volunteer instructors throughout the country. Classes (no tuition charge) are held at headquarters, in public buildings, YMCA's, churches, homes, offices, etc. Free correspondence courses offered to students throughout the world. Director: Margaret E. Bateman. Headquarters: 50 East 69th Street, New York City 21.

Hispanic Society of America, The, founded in 1904 as a free public museum and library devoted to Spanish and Portuguese art and literature. The collections include paintings, sculpture, ceramics, metalwork, furniture, textiles, incunabula, illuminated manuscripts, and other works of art. Membership in the Society, which is limited to 100 Members and 800 Corresponding Members, is honorary and includes specialists and scholars distinguished in the Hispanic field. President: Archer M.

Huntington, Secretary: Herbert E. Ives. **Headquarters:** Broadway, between 155th and 156th Streets, New York City. The Society has issued about six hundred volumes relating to Spanish art, history, and literature.

Historical Association, American, founded in 1884 to promote historical studies, the collection and preservation of historical manuscripts, etc. **Membership:** 8,600. **President:** Sidney B. Fay. **Executive Secretary:** Guy Stanton Ford. **Headquarters:** Study Room 274, Library of Congress Annex, Washington 25, D.C. The annual meeting in 1945 was held in Washington on December 27th.

Home Economics Association, American, organized in 1908 for development and promotion of standards of home and family life. **Membership:** over 15,000 individuals, 814 college clubs, and 11 groups of homemakers. **President:** Mrs. Dora S. Lewis. **Executive Secretary:** Lella Massey. **Headquarters:** 620 Mills Building, Washington 6, D.C. The 1945-46 program of work: Fifty Association officers and committee chairmen met for a week in June, 1945, to plan ways in which the program could be carried out. Conditions made it essential to mobilize the entire membership of the Association on certain critical problems of families. The Association in April, 1945, made a nation-wide survey on the situation in relation to low-priced clothing. Another nation-wide project, "The Consumer Speaks," is being continued in 1945-46. The purpose of this project is to offer consumers an opportunity to cooperate with forward-looking businessmen in improving postwar markets. The apprentice training committee has established requirements for training in industrial food service. Seven international fellowships were awarded to young women from Brazil, China (2), Dominican Republic, and India (3) for 1945-46. The Borden Award was granted to Bertha Burke for outstanding work in nutrition in 1944-45. The Association's Ellen H. Richards research fellowship for 1945-46 went to Dorothy Husseman, University of Illinois. An annual meeting will be held in Cleveland, Ohio the week of June 23, 1946.

Hospital Association, American, founded in 1899 to promote the welfare of the people through the development and extension of hospital care. Serving 3,600 hospitals and 2,900 hospital representatives in the United States and Canada through an exchange of educational materials and technical information. **President:** Peter D. Ward, M.D. **Treasurer:** Harley A. Haynes, M.D. **Executive Director:** George Bugbee. **Headquarters:** 18 East Division Street, Chicago 10. Seven professional and administrative counseling bodies compile and disseminate information to those interested in the public health and welfare. Bacon Library in Association headquarters is the largest library in the world devoted to hospital literature. The Hospital Service Plan Commission, comprised of 85 Blue Cross prepayment hospital-care plans and 33 affiliated medical care plans, serves 20 million participants throughout the country. The Commission on Hospital Care, a nongovernment public service analysis of health facilities in this country, was inaugurated in 1944.

Humane Association, the American, founded in 1877 for the prevention of cruelty to children and animals. **Membership:** 11,000. **President:** Robert F. Sellar. **General Manager:** Walter J. Dethloff, 135 Washington Avenue, Albany, N.Y.

Industrial Conference Board, Inc., The National, founded in 1916 for scientific research, professional education; practical service, and public information in the field of business economics and business management. **President:** Dr. Virgil Jordan. **Secretary:** Leonard E. Read. **Headquarters:** 247 Park Avenue, New York City.

Industrial Council, National, founded in 1907 to provide state and local industrial and manufacturing trade associations with a forum for discussion of industrial and associational problems and programs. **Membership:** 290 associations. **Chairman:** Ira Mosher. **Executive Director:** T. M. Brennan. **Headquarters:** 14 West 49th Street, New York 20, New York.

Industrial Democracy, League for, founded in 1905 with the purpose of education for increasing democracy in our economic, political, and cultural life. **Membership:** 2,000. **President:** Mark Starr. **Executive Director:** Harry W. Laidler. **Headquarters:** 112 East 19 Street, New York City. Conferences held in 1945 celebrated 40th anniversary of I.I.D.; radio broadcasts, lectures, research, pamphlets on postwar reconstruction, debts, taxation, American and British labor movements, etc.

Industrial Organizations, Congress of (CIO), founded in November, 1935, to bring about the effective organization of the working men and women of America, regardless of race, creed, color, or nationality, and to unite them for common action into labor unions for their mutual aid and protection. **Claimed membership:** 6,000,000. **President:** Philip Murray. **Secretary-Treasurer:** James B. Carey. **Headquarters:** 718 Jackson Place, Washington, D.C. The Congress achieved an outstanding record during the war in all basic war production industries, with CIO workers mainly responsible for a 400 percent increase in production. Served in a consultative capacity to the United Nations Conference for International Organization. Instrumental in forming World Federation of Trade Unions, of which it is a member.

Industrial Relations Counselors, Inc., established in 1926 to advance the knowledge and practice of human relationships in industry, commerce, education, and government. **Director:** T. H. A. Tiedemann. **Headquarters:** 1270 Sixth Avenue, New York 20, New York. The organization conducts research, offers a consulting service, mainly for industrial corporations, and maintains a specialized industrial-relations library and an information service. Fifteen volumes and ten monographs had been published by the close of 1945.

Industrial Research Institute, Inc., was founded under the auspices of National Research Council in February, 1938, (incorporated 1945) to promote, through the cooperative efforts of its members, improved, more economical and more effective techniques of organization, administration and operation of industrial research; to develop and disseminate information as to the organization, administration and operation of industrial research; to stimulate and develop an understanding of research as a force in the economic, industrial and social activity of the nation; and to promote high standards in the field of industrial research. A comprehensive monograph on the management of industrial research written by members of the Institute is to be published in 1946. Book to be authoritative reference work for men administering research and a suitable textbook for graduate courses in universities. **Membership:** 76 companies. **President:** J. M. McIlvain. **Secretary:** C. G. Worthington. **Headquarters:** 60 East 42nd St., New York City. Meetings in 1945. Chicago and New York City. February 1946 meeting scheduled for Columbus.

Information Bureau, Inc., National, a nonprofit membership corporation which analyzes national and international charitable organizations for the advice and protection of contributors and philanthropic agencies, founded in 1918. **Chairman:** Allen Wardwell. **Executive Director:** D. Paul Reed. **Headquarters:** 205 East 42 Street, New York City 17.

International Education, Institute of, a nonmembership organization, founded in 1919 to increase international understanding through interchange of students, arranging tours for foreign lecturers, teacher and librarian exchanges, and publication of books, pamphlets and a News Bulletin. The Institute serves as a general clearinghouse of information in its field. **Director:** Stephen Duggan. **Assistant Director:** Edgar J. Fisher. **Headquarters:** 2 West 45th Street, New York, New York. For the academic year 1945-46, 545 fellowships and scholarships were awarded for study at United States colleges and universities. With the end of World War II it is expected that the European student exchanges under the auspices of the Institute of International Education can be resumed within another academic year. The Institute's work in the field of Inter-American cultural relations has continued to expand as in the years since 1939. Increased assistance has also been rendered to displaced foreign scholars and to refugee and stranded students. About 95 State Department fellowships have been arranged for Chinese students during the past year through a two-man committee composed of the Directors of the Institute of International Education and the China Institute of America.

Investment Bankers Association of America, organized in 1912 to serve investment bankers through mutual cooperation, maintenance of high standards of service, self-regulation, and support of appropriate legislation. **Membership:** 691 Main office, 705 Branch office. **Alden H. Little**, Executive Secretary and Treasurer. **Headquarters:** 83 South Clark Street, Chicago.

Iron and Steel Institute, American, founded in 1908 to promote the interests of the industry. **Membership:** about 1,800. **President:** Walter S. Tower. **Secretary:** G. S. Rose. **Headquarters:** 350 Fifth Avenue, New York City.

Italian-American Labor Council, founded in December, 1941, to coordinate all activities upholding democratic principles in the fight against fascism and in harmony with the fundamental elements and objectives of labor unionism; to extend assistance to Italian political refugees, victims of fascist reaction; add to integrate moral and financial Italian-American forces and lead them toward the goal of victory. **Membership:** 250,000. **President:** Luigi Antonini. **Secretary:** Joseph D. Procopio. **Executive Director:** Vincent Bello. **Headquarters:** 202 West 40 Street, New York, N.Y. At the 1945 Columbus Day Celebration the 4-Freedoms Award was given to General Mark W. Clark. At this celebration, a Drive to collect funds for an orphanage in Rome was also inaugurated. Donations of clothing were given to 500 soldiers of the Italian Unit Service and their families, large supplies of powdered milk and medical and surgical articles were sent to the needy in Italy, and funds were furnished to help reestablish democratic forces in Italy for the creation of a democratic state in that country.

Jewish Women, National Council of, founded in Chicago in 1898, carries on a program of service to the foreign born and of education and action in social legislation, social welfare and war activities, international relations and peace, and contemporary Jewish affairs. **Membership:** 65,000 in 215 senior, 72 junior, and 88 councilite sections throughout the United States and Canada. **President:** Mrs. Joseph M. Weit. **Recording Secretary:** Mrs.

Mortimer Brenner. Executive Director: Mrs. Anna K. Schwartz. Headquarters: 1819 Broadway, New York 23, N. Y. During 1945, in addition to its traditional long-range social and educational activities, the Council assisted in various national wartime and governmental programs, through disseminating information and by membership action. As a member of the American Council of Voluntary Agencies for Overseas Relief, the Council was asked by the United States Relief and Rehabilitation Administration to act as coordinating agency for the Jewish community in the Emergency Clothing Collection for Europe, made by the synagogues and churches of America. The Council, at the request of the Government, assisted in social welfare work and in supplying supplementary needs for the refugees at the Emergency Refugee Shelter, Oswego, N.Y. The Council is a member and was active in the organization of the Central Location Index, established last year to cooperate in the location of relatives and reuniting of war-dispersed families of Europe, work similar to that begun by the Council as part of its overseas reconstruction program after World War I.

Joint Distribution Committee, Inc., The American Jewish (J.D.C.), founded during the first World War to give emergency and reconstruction aid to needy Jews overseas. Membership: 7,147 in the National Council. Chairman: Edward M. M. Warburg. Executive Vice-Chairman: Joseph C. Hyman. Secretary: Moses A. Leavitt. Headquarters: 270 Madison Avenue, New York City. During 1945 J.D.C. spent a total of \$27,880,000 to provide these services to hundreds of thousands of persons; food, shelter, clothing, medical aid and child care, emigration assistance, vocational training, cultural and educational help, resettlement and economic aid. During that period 8,500 persons were enabled to emigrate from Europe to Palestine, in addition to which several hundred were helped to other havens of safety.

After Pearl Harbor, local committees affiliated with the J.D.C. in enemy-occupied countries continued essential relief programs by borrowing money, food and commodities locally on the basis of a J.D.C. promise to repay the loans thus incurred when possible without aiding the enemy. J.D.C. work on behalf of native and refugee Jews goes on in all of Europe, Algeria, French Morocco, Tunisia, Tangier, Turkey, Iran, Shanghai, Palestine, and other areas. It is shipping food and clothing packages to refugee Jews in Soviet Asia from supply points in Palestine and Iran. During 1944 and 1945 it rescued thousands of refugees with the help of the War Refugee Board and other agencies, transporting them to other countries and sustaining them there. Its major program outside Europe is in Latin America, where there are 125,000 immigrants whom J.D.C. programs of relief and rehabilitation have helped to fit into their new lives.

A large portion of J.D.C. funds are being spent in behalf of Europe's Jewish children. J.D.C. entirely or partially supports more than 30,000 orphans or displaced children in France, Holland, Belgium, Poland, Greece, and Italy alone. The J.D.C. cooperates closely with major private and governmental relief bodies including the War Refugee Board, United Nations Relief and Rehabilitation Administration, Inter-governmental Committee on Refugees, and International Red Cross.

Junior Leagues of America, Inc., Association of the, founded in 1921, to unite the 158 Junior Leagues and through them educate their members for effective volunteer service in community agencies and for shaping welfare and cultural programs. Membership: 42,000. President: Miss Cecil Lester Jones. Executive Secretary: Mrs. C.H.L. Pennock. Headquarters: Hotel Waldorf-Astoria, New York, New York.

Just and Durable Peace, Commission on a, formed in December, 1940, to clarify the mind of Christian churches regarding the moral, political, and economic foundations of an enduring peace. Membership: 100. Chairman: John Foster Dulles. Secretaries: Drs. Walter W. Van Kirk and Richard M. Fagley. Headquarters: 297 Fourth Avenue, New York City 10. Activities in 1944 included publication of a bi-monthly bulletin, *Post War World*, continuation of the program of education in the Churches, and convening of the Second National Study Conference on a Just and Durable Peace held at Cleveland, Ohio, Jan. 16-18, 1945.

Kindergarten Association, National, founded in 1909 to help secure the advantages of kindergarten education for all the nation's children. Membership varies from 2,245 to 8,000. President: Maj. Bradley Martin. Executive Secretary: Bessie Locke. Headquarters: 8 West 40th Street, New York City 18. The Association has given advice to many who wished to have a class opened in their public school, has furnished many hundred thousands of free leaflets on kindergarten values and has loaned prepared programs and the film: *A Day in the Kindergarten*. In 1945, special effort was put forth to arouse, among leaders of state organizations, an interest that would culminate in securing the enactment of better kindergarten legislation. Improved laws were passed in 6 states. As a result of other work done by the Association in 1945, 1580 children have been enrolled in new kindergartens, bringing the total since 1909 to over 1,282,800 children. Weekly Home Education articles

dealing with child behavior problems are furnished free to the press and to Home Demonstration agents; present combined circulation is over 83,214,000. The radio has been used with increasing benefit.

King's Daughters and Sons, International Order of the, (1886) 144 East 87th Street, New York 16, N.Y. Miss Kate O. Hall, Executive Secretary.

Membership: individual, approximately 60,000; Circles, Unit organization, approximately 2,500.

Purpose and Activities: To develop spiritual life and stimulate Christian activities. The Order maintains homes for the aged, for children, summer camps, hospitals and other welfare institutions. It carries on educational activities. Periodicals: *The Silver Cross*, monthly, except July and August. Price \$1.00 per year.

Expansion Educational program thru Summer School under direction N.Y.U. college credits thru Scholarships from Branches

Kiwanis International, founded at Detroit in 1915 to develop a closer relationship between leaders of business, industry, the professions and agriculture, and for civic, social and welfare service to their respective communities. Membership: 154,000 in 2,330 clubs throughout the United States and Canada. President: Hamilton Holt, Macon, Ga. Secretary: O. E. Peterson, Chicago, Ill. General Office: 520 North Michigan Ave., Chicago 11, Ill. Club activities include participation in public affairs, service to underprivileged children, work among boys and girls, fostering closer rural-urban relationships, support of churches in their spiritual aims, promotion of soil conservation, encouragement of better business standards, assistance to returning veterans and aid in postwar reconversion. The motto of Kiwanis is "We Build," while the 1946 theme is "Build for Peace—Unity—Opportunity." The 1946 Victory Convention will be held at Atlantic City, June 9 to 13.

Knights of Columbus, a fraternal benefit society founded in 1882. Membership: 540,000. Supreme Knight: John E. Swift. Supreme Secretary: Joseph F. Lamb. Headquarters: 45 Wall Street, New Haven, Conn.

Knights of Pythias, a fraternal organization founded in 1864. Membership: 300,000. Supreme Chancellor: Chas. J. Schuck, Wheeling, W.Va. Supreme Keeper of Records & Seal: M. M. Ewen, 1054 Midland Bank Building, Minneapolis, Minn. The Supreme Lodge meets biennially, the next meeting to be in August, 1946.

Labor, American Federation of (A.F.L.), founded Nov. 15, 1881, as an organization of wage earners into trade unions and groups of unions for the advancement of their economic interests. Claimed membership: 6,938,000. President: William Green. Secretary-Treasurer: George Meany. Headquarters: A.F.L. Building, 901 Massachusetts Ave., N.W., Washington 1, D.C. The annual convention was held in New Orleans, La. Nov. 20-30, 1944. The 1946 convention is scheduled to open on the first Monday in October, in Chicago, Ill. No convention was held in 1945.

Law Institute, The American, founded in 1923 to promote the clarification and simplification of the law and its better adaption to social needs, to secure the better administration of justice, and to encourage and carry on scholarly and scientific legal work. Membership: 850. President: George Wharton Pepper. Director: William Draper Lewis. Headquarters: 3400 Chestnut Street, Philadelphia.

Learned Societies, American Council of, founded in 1919 to promote the advancement of the humanistic sciences. Membership: 48 delegates (two from each of 24 constituent societies). Chairman: Fred N. Robinson. Director: Waldo G. Leland. Secretary-Treasurer: S. Whitmore Boggs. Headquarters: 1219 Sixteenth Street, N.W., Washington 6, D.C. Next annual meeting to be during last week in January, 1946, at the Westchester Country Club, Rye, N. Y.

Legal Aid Organizations, National Association of, founded in 1921 as a central body representing organizations engaged in rendering legal aid service to promote the work and to cooperate with the judiciary, the bar, and all organizations interested in the administration of justice. Membership: 58 organizations. Honorary President: Hon. Harlan F. Stone. President: Louis Fabricant. Secretary: Emory A. Brownell. Headquarters: 255 Exchange Street, Rochester 4, N. Y. Emphasis of the work in 1945 has been on providing legal aid in home communities to servicemen and returning veterans. Member organizations are designated by the Army, Navy and the Selective Service System to implement their legal assistance offices at military establishments. Over 44,000 cases handled for servicemen and dependents during 1944. Publications include *Committee Reports and Proceedings*, *Annual Directory* and the *NALAO Brief Case*.

Legion of Decency, National, founded in 1934 to review and evaluate morally current entertainment feature motion pictures and to encourage wholesome standards of morality and decency in the cinema. The Motion Picture Department of the International Federation of Catholic Alumnae is the reviewing group for the Legion of Decency. Membership of the Episcopal Committee on Motion Pictures: 5. Executive Secretary: The Very Rev. Monsignor John J. McClafferty. Assistant Executive Secretary: The Rev. Brendan Larnen, O.P. Chairman, Motion Pic-

ture Department, I.F.O.A.: Mrs. James F. Loomam. Headquarters: 35 East 51st Street, New York City 22.

Library Association, American (A.L.A.), founded in 1876 to provide complete and adequate library coverage for the United States and Canada. Membership: 15,000. President: Ralph A. Ulveling. Executive Secretary: Carl H. Milam. Headquarters: 520 N. Michigan Avenue, Chicago. International Relations Office: Library of Congress Annex, Washington, D. C. Harry M. Lydenberg, director. National Relations Office, 1709 M St., N. W., Washington, D. C., Paul Howard, director. Major event of the year was the establishment in October of the National Relations Office, supported by volunteer contributions of librarians to "advance and protect the interests of libraries, and of people who use libraries, in so far as those interests may be helped or hurt by legislation, regulation or other government action." Recommendations for postwar planning for all types of libraries have been developed, and estimates of national library needs are under way. American Libraries in Mexico City, Managua and Montevideo continue to function under A.L.A. administration. Government and foundation support for the Association's national activities amounted to \$895,000 for 1944-45. No conferences were held until ODT regulations relaxed, but a limited conference was held in Chicago Dec. 27-28, and full-scale national conference is scheduled for Buffalo, N. Y., June 16-22, 1946. The Newbery Medal for 1945 went to Robert Lawson for *Rabbit Hill*; the Caldecott Medal to Elizabeth Orton Jones for *Prayer for a Child*.

Library Association, The, founded in 1877 (incorporated by Royal Charter in 1898) to unite all persons engaged or interested in libraries, hold examinations and maintain a professional register, promote the establishment of public libraries, encourage bibliographical study, publish journals, and hold conferences. Membership: 6,500. President: H. M. Cashmore. Secretary: P. S. J. Welsford. Headquarters: Chaucer House, Malet Place, London, W C 1. The Association's Carnegie Medal for an outstanding children's book published in Great Britain during 1944 was awarded to Eric Linklater for *The Wind on the Moon*.

Lions Clubs, International Association of, founded in 1917 as an international association of Lions Clubs, composed of business and professional men interested in the development of their communities. Membership: 240,000 in 5,000 clubs located in 15 countries, namely, British Honduras, Canada, China, Colombia, Costa Rica, Cuba, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, the United States and Venezuela. President: Ramiro Collazo. Secretary-General: Melvin Jones. Headquarters: 332 S. Michigan Avenue, Chicago. Their activities have eight classifications: boys and girls, citizenship and patriotism, civic improvements, community betterment, education, health and welfare, safety, sight conservation and blind. From May 1, 1944, to Apr. 30, 1945, 74,869 separate activities were reported by Lions Clubs. The official publication of the organization is the *Lion Magazine*, issued monthly.

Little Business Men's League of America, founded in 1938 to unite the interests of small business men. President, William Castleman; Secretary, Joseph R. Conkey. Headquarters, 619 North State Street, Chicago 10. Publishers of *The Little Businessman*, *The Voice of Small Business*. The League's 1945-46 program is as follows: To secure legislation from government to reduce taxes, so that small business can expand and modernize and be able to create more jobs.

Management Association, Inc., American, founded by a merger of predecessor organizations in 1923 to provide executives of commercial and industrial companies with a means of exchanging information on management policies and techniques. Held 18 conferences and issued 103 separate publications in 1945. Membership: 7,700. President: Alvin E. Dodd. Chairman of the Board: William L. Batt. Secretary: Henry J. Howlett. Editor: James O. Rice. Headquarters: 330 West 42 Street, New York 18, N. Y.

Manufacturers, The National Association of (N.A.M.), celebrated its 50th anniversary Jan. 22, 1945. Today the National Association of Manufacturers has more than 14,000 active members and approximately 1,200 associate members. Affiliated with the association is the National Industrial Council, a federation of some 300 national, State, and local associations of employers. The association is governed by a board of directors of 150 members which meets nine times a year. Fifteen hundred executives representing industries, large and small, in all parts of the United States, serve on standing committees and special committees of the association and meet time and again throughout the year to reconcile geographical and industrial differences on every subject of general interest to industry. Once every four years, when national presidential elections are held, the association presents to the major political parties organized industry's recommendations as to the principles required for solution of major national problems. In December of each year is held the Congress of American Industry, bringing together several thousand manufacturers for conference upon major national and industrial problems and for discussion of their own major responsibilities and opportunities. Besides this annual Congress of American Industry, the association

each year holds numerous regional meetings in different parts of the United States, for the purpose of bringing together its members in different sections. The association has been and is actively engaged in studying problems connected with the prevention or control of inflation, the termination of war contracts, the postwar use to be made of war plants, the postwar disposal of surplus government-owned equipment and supplies, the termination of war controls, and the resumption of civilian production. Besides its active interest in these problems of the transition period between war and real peace, the association is also vitally interested in the longer range problems. In advancing the interests of its members, the association operates through six departments. It has a Taxation Department which is operated in connection with tax committees. The Industrial Relations Department operates through committees on industrial-relations policy; labor legislation; supervisory relations, etc. The Economic Security Department deals with problems involved in the national Social Security Act. The Public Relations Department handles the public-relations phases of the association's work. The Research Department supplies information for all of the association's committees, departments, and officers, and makes special studies of many important problems. The Law Department serves primarily as a legal adviser to the association, its officers, committees, and board of directors. Through its *Law Digest* and other publications, the Law Department gives to members a review and analysis of new laws, regulations, and decisions affecting industry. One of the most important functions of the National Association of Manufacturers is its service as industry's interpreter to the public. It has, for example, committees promoting cooperation with farmers, with clergymen, with educators, and with leaders of women's clubs throughout the country, endeavoring thus to bring about a greater understanding of industrial problems and viewpoints. To reach the public the association uses every available medium—radio, newspapers, motion pictures, advertising, and booklets. The headquarters of this association is located in New York City; it also maintains offices in Washington, San Francisco and Los Angeles, in addition, Regional Offices are maintained in the following cities: Chicago, Illinois; Dallas, Texas; Denver, Colorado, Atlanta, Georgia; St. Louis, Missouri; Philadelphia, Pa.; Portland, Oregon; and Seattle, Washington.

The NAM officers for the year 1946 are: Chairman of Executive Committee: Robert M. Gaylord. Chairman of the Board: Ira Mosher. President: Robert R. Wason. Executive Vice-President: Walter B. Weisenburger. Secretary: Noel Sargent. Treasurer: Kenneth R. Miller.

Mathematical Society, American, founded in 1888 for the promotion and publication of research in mathematics. Membership: 2,800. President: T. H. Hildebrandt. Secretary: J. R. Kline. Headquarters: Low Memorial Library, Columbia University, New York City. Due to the regulations of the Office of Defense Transportation, meetings for 1945 were confined mainly to the Summer and Annual Meetings. A full roster of meetings is planned for 1946. A Policy Committee is being organized to study problems which will confront mathematics in its relation to other sciences and national welfare during the postwar period. Meetings already scheduled for 1946 are: New York in February, April, and October; Chicago in April, Berkeley, California, in April, Summer Meeting at Cornell University.

Mayors, United States Conference of, founded in 1932 as a clearinghouse for American cities on problems of municipal government. Membership: 250 cities over 50,000 in population. President: Mayor Edward J. Kelly. Executive Director: Paul V. Betters. Headquarters: 730 Jackson Place, Washington, D. C.

Mechanical Engineers, The American Society of, founded in 1880 to promote mechanical engineering and allied arts and sciences. Membership: 19,819. President: D. Robert Yarnall. Headquarters: 29 West 39 Street, New York 18, N. Y. The Society participated in the war production program through public meetings, committee service in research and standardization, and the assembly of records of individual members available for positions in the war effort. At the annual meeting, New York, Nov. 26-30, 1945, the A.S.M.E. Medal was awarded to William F. Durand; the Holley Medal to Sanford A. Moss; the Warner Medal to Joseph M. Juran; the Melville Medal to William J. King; the Junior Award to Bruce E. Del Mar; the Main Award to Jack Drandell, and the Undergraduate Student Award to John W. Erickson. Meetings are scheduled to be held in Chattanooga, Tenn., Apr. 1-8, 1946 (spring meeting); Detroit, Mich., June 17-20, 1946 (semi-annual meeting); Boston, Mass., Sept. 30-Oct. 2, 1946 (fall meeting); New York, N.Y., Dec. 2-6, 1946 (annual meeting).

Mediaeval Academy of America, founded in 1925 to conduct, encourage, and support research, publication, and instruction in mediaeval record, languages, literature, arts, archaeology, history, philosophy, science, and all other aspects of mediaeval civilization. Membership: 1,050. President: George R. Coffman. Executive Secretary: Charles R. D. Miller. Headquarters: 1480 Massachusetts Avenue, Cambridge 38, Mass. The Haskins Medal, offered

annually for a distinguished publication in the field of mediaeval studies, was awarded in 1945 to George Edward Woodbine for his edition of *Bracton de Legibus et Consuetudinibus Regni Angliæ*. Three volumes concerned with the Middle Ages were published in 1945. *Speculum*, the journal of the Academy, is published quarterly.

Medical Association, American, founded in 1847 to promote the science and art of medicine and the betterment of public health. Membership: 125,287. President: Roger I. Lee. Secretary and General Manager: Olin West. Headquarters: 535 N. Dearborn Street, Chicago. The Distinguished Service Medal and Citation for distinguished service in the science and art of medicine was awarded December 8, 1945, to Dr. George R. Minot, Boston. The Association will hold a scientific session in San Francisco, July 1-5, 1946.

Medical Association, Canadian, founded in 1867 and interested in all matters concerning the practice of medicine. Membership: 7,000. President: Léon Gérin-Lajoie, M.D., Montreal. General Secretary: T. O. Routley, M.D. Headquarters: 184 College Street, Toronto, Canada.

Mental Hygiene, Inc., The National Committee for, founded in 1909 to promote interest and action throughout the United States in the prevention and control of mental illness and the conservation of mental health. Elected membership: over 700. Medical Director: Dr. George S. Stevenson. Headquarters: 1790 Broadway, New York City 19.

Metals, American Society for, an organization devoted to the promotion of the arts and sciences connected with either the manufacture or the treatment of metals. Membership: 19,912. President: Charles H. Herty, Jr. Secretary: W. H. Eisenman. Headquarters: 7301 Euclid Ave., Cleveland 8, Ohio. The postponed 1945 National Metal Congress and Exposition will be held in Cleveland the week of February 4, 1946.

Meteorological Society, American, founded in 1919 for the advancement and diffusion of knowledge of meteorology (including climatology) and its application to public health, agriculture, engineering, transportation, and other forms of industry and commerce. Membership: about 2,700. Secretary: Charles F. Brooks. Headquarters: Blue Hill Observatory, Milton 86, Mass. The Society publishes the *Bulletin and Journal of Meteorology*.

Mineralogical Society of America, founded in 1920 for the advancement of mineralogy, crystallography, petrology, and allied sciences. Membership: about 1,000. President: K. K. Landes, University of Michigan, Ann Arbor, Michigan. Secretary: C. S. Hurlbut. Headquarters: Harvard University, Cambridge, Mass.

Mining and Metallurgical Engineers, American Institute of, founded in 1871 to promote the arts and sciences connected with the production of useful minerals and metals and the welfare of those employed in these industries. Membership: 13,300. President: Louis S. Cates. Secretary: A. B. Parsons. Headquarters: 29 West 39 Street, New York 18, N. Y. In 1945 the James Douglas Medal was awarded to Robert F. Mehl; the Robert W. Hunt Medal to E. Chester Wright; and the J. E. Johnson, Jr., Award to Carl G. Hogberg.

Mission to Lepers, Inc., American, organized in 1906, incorporated in 1920, to aid and preach the Gospel to people suffering from leprosy and to encourage their segregation, care and medical treatment throughout the world. Membership: 60,000. President: Dr. Wm. Jay Schieffelin. General Secretary: Dr. E. R. Kellersberger. Associate Secretary: Raymond P. Currier. Headquarters: 156 Fifth Avenue, New York City. During 1945 the Mission was again able to reach leprosy colonies in the Philippine Islands and East China, with prospects of soon reaching those in South China, Korea, Thailand, Burma, Japan and Formosa.

Modern Language Association of America (M.L.A.), organized in 1883 to promote literary and linguistic research in all the fields of the Modern Languages and Literatures. Membership: 8,800. President: Fred N. Robinson. Secretary: Percy W. Long. Headquarters: 100 Washington Square, New York City 3.

Moose, Loyal Order of (Supreme Lodge of the World), a fraternal organization founded in 1888. Membership: 607,481. Director-General: Hon. James J. Davis. Supreme Governor: Charles W. Bowers. Supreme Secretary: Malcolm R. Giles. Headquarters: Moosehead III.

Motion Picture Producers and Distributors of America, Inc., organized in 1922 to foster the common interest of those engaged in motion picture industry. President: Eric A. Johnston. Secretary: Carl E. Milliken. Headquarters: 28 West 44 Street, New York City. The annual meeting was held in New York City in March, 1945.

Municipal Association, American, the national federation of the State Leagues of Municipalities, founded in 1924. It carries on activities designed to assist member leagues in their work of serving and representing their member municipalities. Membership: 41 State Leagues, representing 9,000 cities and towns. President: R. E. Riley, Mayor, Portland, Oregon. Executive Director: Earl D. Mallory. Headquarters: 1213 East 60 Street, Chicago, Ill. The Association provides a consulting service on special phases of municipal government, and keeps its members informed of Federal legislation affecting municipal

government; it represents the interests of municipalities nationally, in much the same way that the State leagues represent municipalities before the State governments.

Municipal League, National, a nonprofit citizen organization founded in 1894 and serving as a national clearinghouse for information on local government improvement and the development of a more enlightened citizenry through the preparation of model laws and administrative systems and cooperation with local civic organizations. Membership: 2,000. President: Hon. John G. Winant. Executive Secretary: Alfred Willoughby. Headquarters: 299 Broadway, New York 7, N. Y. Publications: *National Municipal Review*, published monthly, and various books, pamphlets, and reports. Annual conference on government will be held in 1946 in Philadelphia in observance of 50th anniversary of founding. Special publications in 1945 were: *The County Manager Plan*, *Best Practice Under the Manager Plan*, *Model Cash Basis Budget Law*, and *Model Accrual Budget Law*.

Museums, American Association of, founded in 1906 to help museums solve their problems and increase their usefulness. Membership: 1,100. President: David E. Finley. Director: Laurence Vail Coleman. Headquarters: Smithsonian Institution, Washington, D. C. The Association has two major functions—long range work that shapes broadly the courses of museum development, and direct and immediate usefulness to museums. The former program was advanced during 1945 through a study of museum buildings. A book on this subject is planned as a contribution to the anticipated postwar building of museums in many cities. The Association's program of direct service is being carried forward as usual through serial publications and consulting work. The Association publishes *The Museum News*, a bi-weekly paper devoted to news of the museum world, which completed its 22nd volume in 1945.

Music Clubs, National Federation of, founded in 1898 for the purpose of "bringing into working relation with one another music clubs and other musical organizations and individuals directly or indirectly associated with musical activity for the purpose of aiding and encouraging musical education and developing and maintaining high musical standards throughout America." Membership: about 500,000 members in 5,000 clubs. President: Mrs. Guy Patterson Gannett. Secretary: Mrs. H. Carroll Day. Publications and Business Offices: 113 E. Green Street, Ithaca, New York. The Federation has outfitted all hospital ships bringing home American wounded with records, phonographs, and musical kits. Through a Music in Hospitals program, in which it cooperates with the American Red Cross, it is sending ward music into Army and Navy Hospitals throughout the country and into some Veterans Bureau and Public Health Hospitals as well. It is also providing musical instruments for these hospitals and in most instances keeping them in repair. This work is being continued with the armistice of occupation. Its Biennial Young Artists Auditions, for which four prizes of \$1,000 each are offered, are continuing with the next scheduled for the spring of 1947. Annual Young Composers Contests are held with a top prize of \$150 and several smaller prizes. An intensified American Composition program has been started, a feature of which is the distribution of monthly lists of reviews of all new American works in the serious music field to federated clubs, schools, and libraries. The Federation is making an annual selection of works of American composers which its Orchestras Committee recommends to leading conductors for inclusion in their programs. The Federation publishes the *Music Clubs Magazine* issued bi-monthly September to June.

Music Council, Inc., National, organized April, 1940, to provide a forum for the discussion of problems affecting national musical life, to speak with one voice for music in the United States, to provide for an interchange of musical information, to encourage coordination of effort among musical organizations, to conduct surveys, to encourage the development of music and to foster the highest ethical standards in it. Membership: limited to nationally active musical associations, now numbers 42 such associations, with an individual membership of over 600,000. President: Howard Hanson. Executive Secretary: Edwin Hughes. Headquarters: 838 West 89th Street, New York 24, N. Y. The Council publishes in its *Bulletin* digests of proposed national legislation affecting music, authoritative information on musical activities in the various departments and agencies of the Federal Government, government regulations concerning music, lists of musical contests and competitions, annual surveys of the programs of the major symphony orchestras of the United States, together with other surveys of national musical activities, information as to the use of music in industry, in hospitals, and in various other fields which affect the national music picture, and news of the activities of its member organizations. The Council has assisted the veterans Administration through Music Consultants to work with the officers of the Administration at each of its local offices in advising and assisting returning servicemen who wish to enter the field of music. The Council made the first nation-wide survey of the Use of Music in

Hospitals for Mental and Nervous Diseases, and published a report on this survey. The Council is represented on the Music Advisory Committee of the Division of Cultural Relations in the State Department. The annual meeting is held in May, and general sessions of the Council are called during each year as occasion demands.

National Guard Association of the United States, founded in 1878 to advance the interests of the National Guard, improve its armament, equipment, and training for the greater security of the nation. Membership includes the entire complement of officers of the National Guard in each state and territory, totaling about 250,000. President: Maj. Gen. Ellard A. Walsh, State Capitol, St. Paul, Minn. Secretary: Brig. Gen. Fred M. Waterbury, 70 East 45 Street, New York, N. Y.

Nature Association, American, founded in 1922 to stimulate public interest in every phase of Nature and the out-of-doors, and to further the practical conservation of the great natural resources of America. Membership: 66,000. President: Arthur Newton Pack. Secretary: Richard W. Westwood. Headquarters: 1214 16th Street, N.W., Washington 6, D.C. Official organ of the Association is *Nature Magazine*.

Navy League of the United States, founded in 1902 with the object of acquiring and spreading before the citizens of the United States information as to the condition of the naval forces and equipment of the United States and to awaken interest and cooperation in all matters tending to aid, improve or develop their efficiency. It is non-profit, non-partisan, non-commercial and non-sectional in character. Every civilian who is an American citizen in good standing, and all officers and enlisted personnel of the armed services released or discharged from such service under honorable conditions, are eligible for membership. The basic purpose of the Navy League is to keep the citizens of this country properly informed as to the needs of our Navy in order that it may be constantly and efficiently maintained as the greatest sea-air power in the world, which position it now occupies. The citizens of the United States looking ahead will be satisfied with nothing less, and the Navy League undertakes to keep this objective constantly alive and before the people of our country. The President is Ralph A. Bard and the Secretary is Evelyn M. Collins. Headquarters. The Mills Building, Washington 6, D.C. The Navy League of the United States inaugurated Navy Day in 1922 and has sponsored it annually since that time.

Near East Foundation, an organization founded in February, 1930, for humanitarian and welfare activities in the countries of the Near East. Membership: 50,000. President: Cleveland E. Dodge. Executive Secretary: Edward C. Miller. Headquarters: 17 West 46 Street, New York, N. Y. The Foundation is actively engaged in war relief work in the Near East. From 1940 through September, 1945, it has collected a total of \$2,033,745.60. The beneficiaries of this money will be the unfortunate war victims in Greece, Syria, Cyprus, Iran and Lebanon.

Netherlands-America Foundation, Inc., founded in 1921 to deepen understanding and friendship between the Netherlands and the United States through educational and cultural channels. Membership: 419. Hon. President: Thomas J. Watson. President: Peter Grimm. Secretary: Charles P. Luckey. Executive Secretary: Thomas E. Freeman. Headquarters: 10 Rockefeller Plaza, New York 20, N.Y. The Annual Meeting is held the third Monday in January. The most important project at the present time is to procure scholarships which will enable Dutch students to come to this country and study in our colleges and universities.

New Education Fellowship, The, founded in 1915 to promote the unity of educators throughout the world interested in progressive education. Deputy-Chairman, J. A. Lauwerys, London University; Secretary, Miss Clare Soper, International Headquarters, 1 Park Crescent, London, W. 1, England. During 1945 the Fellowship issued monographs designed to give guidance to those who will work with children suffering from the effects of the war. Monograph 1. Children's Communities; Monograph 2. Fatherless Children; Monograph 3. Play and Mental Health. Price 50 cents each. Monographs on new education plans in the liberated countries are also in preparation. Conferences: August, 1946—a Regional N.E.F. in Paris—also a small conference on "Ethics" in England. Possibly a Scandinavian Conference in Denmark.

Newspaper Publishers Association, American, founded in 1887 to foster and protect the interest of the newspaper publishing business. Membership: 752. President: William G. Chandler. General Manager: Cranston Williams. Headquarters: 870 Lexington Avenue, New York, N.Y. The 1946 meeting will be held in New York City at the Hotel Waldorf-Astoria April 23-25.

Numismatic Society, The American, founded in 1858 for the collection, preservation, and study of coins, medals, and decorations of all countries. Membership: 470. President: Dr. Herbert E. Ives. Secretary and Curator: Sydney P. Noe. Headquarters: Museum at Broadway and 156 Street, New York, N. Y. A loan exhibition by members of choice Greek coins was held in November, 1945. Meetings are held at the Museum on the second Saturday in January, April and November.

Nurses' Association, American, founded in 1896 to promote the professional and educational advancement of nurses, to elevate the standard of nursing education, and to establish and maintain a code of ethics among nurses. Membership: 178,415. President: Katharine J. Densford, R. N. Secretary: Margaret K. Stack, R. N. Headquarters: 1790 Broadway, New York 19, N. Y. During 1945, the American Nurses' Association, working through its constituent State Nurses' Associations, assisted in the procurement of nurses for the military, and created a representative Committee on Nursing Service which will give attention to personnel practices including salaries for nurses. Further, the Association initiated a nation-wide counseling and placement service, one phase of which relates to the counseling of veteran nurses.

Nutrition Foundation, Inc., The, organized in December, 1941, to develop and apply the science of nutrition as a basic science of public health. Membership: 47. Chairman of the Board: Karl T. Compton. President: George A. Sloan. Scientific Director: Charles Glen King. Executive Secretary: Ole Salthus. From May, 1942, when the initial grants were made, to June 30, 1945, the Foundation appropriated \$927,190.00 for 101 studies in the science of nutrition at 44 leading universities and hospitals. The Foundation publishes *Nutrition Reviews*, a monthly journal providing an unbiased review of the world's current research literature in the field of nutrition. The Foundation also publishes *Nutrition*, a Spanish edition of *Nutrition Reviews*, in the interests of medical and public health education in the Spanish-speaking Americas, and in the promotion of cultural relations.

Occupational Therapy Association, American, founded in 1917 to promote the use of occupational therapy and for education, training, research, and other activities advantageous to the profession. Membership 2,300. President: Everett S. Elwood. Treasurer: Holland Hudson. Executive Secretary: Mrs. Meta R. Cobb. Headquarters: 83 West 42nd Street, New York 18, N. Y.

Odd Fellows, Independent Order of, a fraternal organization founded in 1819. Membership: 1,393,160. Grand Sire: D. D. Monroe. Grand Secretary: Edw. G. Ludvigsen. Headquarters: 16 West Chase Street, Baltimore, Md. The 1946 meeting will be held in Birmingham, Alabama.

Oriental Society, American, founded in 1842 for the promotion of research in oriental languages and cultures and the publication of books and papers. Membership: 875. President: E. A. Speiser. Secretary: Ferris J. Stephens, Yale University, New Haven, Conn.

Ort, Women's American, a national organization founded in 1927, as a constituent body of the American Ort Federation, which is part of the World Ort Union, whose purpose is the promotion of technical trades and agriculture among Jewry in vocational and technical trade schools, agricultural colonies, cooperatives and workshops. For over 60 years the Ort has trained the dislocated and the underprivileged to become integrated into the economic scheme of their native lands or in countries of refuge.

During the war Ort functioned in Europe and laid the groundwork for post war economic reconstruction, and now constitutes a part of the rebuilding of liberated Europe. Ort is cooperating with governments of the countries in which it functions. In addition, since the Nazi regime stripped the occupied countries of working tools and all needed equipment, Ort's present work includes supplying tools, machines and raw materials to displaced workers, to reestablish themselves individually or collectively in their former professions. Effective expansion this year resulted in three regional groups—a New York Metropolitan Regional (comprising 22 chapters in Greater New York); a Connecticut Regional and a Mid West Regional. The Guardianship-Vocational Training Plan was also launched in 1945—to partially maintain and train European Jewish war orphans, training them in useful skills, apprenticing them to master craftsmen, thus qualifying them technically to participate in the reconstruction of their countries. Membership approximately 20,000. President: Mrs. Maurice Finkelstein. Headquarters: 212 Fifth Ave., New York 10, N.Y. Events of 1945-46 include the Annual Donor Luncheon at the Hotel Astor May 9th, 1945; the Annual Regional Membership Luncheon at the Hotel Commodore November 28, and the Annual Donor Luncheon at the Hotel Astor May 8th, 1946. Chapter meetings are held monthly in the 49 chapters throughout cities in the United States.

Pacific Relations Institute of, founded in 1925 to promote scientific study and discussion of the problems and inter-relations of the peoples of the Pacific area. Composed of National Councils in several countries bordering on or having interest in the Pacific Ocean. Chairman: Edgar J. Tarr, K. C. Secretary-General: Edward C. Carter. The Chairman of the American Council is Robert Gordon Sproul. Secretary: Raymond Dennett. Headquarters: 1 East 54 Street, New York City 22. Membership: 1,158. Publications: *Studies of the Pacific* (research series); *Far Eastern Survey*, fortnightly; popular pamphlets; basic texts on Far East for school use.

Pan American Foundation, founded in 1938 to promote and maintain, through nongovernmental means and agencies, the principles and policies of Pan Americanism. The

foundation promotes the founding of a Pan American University, and assists and cooperates in the exchange of literary, artistic, musical, scientific, and medicinal accomplishments between the peoples of the Western Hemisphere. Director. A. Curtis Wilgus. Secretary. William A. Reid. Headquarters: 1217 Thirteenth Street, N.W., Washington, D.C.

Pan American Women's Association, founded in 1930 to promote inter-American understanding through cultural interchange. President: Frances R. Grant. Secretary: Jessie Adamson. Headquarters: 45 West 45 Street, New York, N. Y. During 1945 the Association held its panel luncheons on the third Saturday of each month and continued its concerts, exhibitions, and special institutes on inter-American problems.

Peace Conference, National, founded in 1933 with a three-fold purpose: as a council board, as a clearinghouse, as a publishing and service agency to provide nonpartisan information on international affairs. Membership, 36 national organizations. President, John Paul Jones; Administrative Vice President, Jane Evans; Executive Secretary, Marian R. Emerine. Headquarters: 8 West 40 Street, New York N.Y. The Conference holds monthly meetings of organizational leaders to discuss current problems, clarify issues, and plan programs. Recent publications of the Conference include a study pamphlet *Pros and Cons of Peacetime Conservation and Complete Text of the United Nations Charter*.

P.E.N. Club, a world association of writers, founded in 1922 in the interests of literature, freedom of artistic expression, and international good will. Membership (American Center): 335. President. Carl Carmer. Secretary: Whit Burnett. Headquarters: 16 East 96 Street, New York City. The International Federation of the P.E.N. Clubs is headed by a Presidential board, consisting of H. G. Wells, Dr. Hu Shih, Thornton Wilder, and Denis Sauret.

Pen Women, National League of American, founded in 1897 to promote the creative, cultural arts of Pen, Pencil and Brush. Membership: 3,100. Eighty nine Branches. Headquarters, 408-09 Willard Hotel, Washington, D. C. President, Blanche Smith Ferguson. The League holds a Biennial Congress on numerically even years, a Mid-administration Congress on numerically odd years. The League publishes a monthly magazine, *The Pen Woman*, editor, Winifred Willard; also a Membership Roster biennially.

People's Lobby, Inc., The, founded in 1931 (formerly the People's Reconstruction League, founded in 1920) to work for legislative and administrative measures in the interest of all the people. Membership: 3,490. President: Bishop Francis J. McConnell. Executive Secretary: Benjamin Marsh. Headquarters: 1410 H Street, N.W., Washington, D.C. During 1945 the organization distributed about a quarter of a million reprints of its material. It worked for government retention of its war plants to be converted to peace production. It held two conferences and published all addresses as pamphlets.

Petroleum Institute, American, founded in 1919 to afford a means of cooperation with the government, foster trade in petroleum products, promote the interests of the industry, the mutual improvement of its members, and the study of related arts and sciences. Membership, about 4,000. President: W. R. Boyd, Jr. Secretary: Lacey Walker. Headquarters: 50 West 50 Street, New York City.

Philatelic Society, American, an organization of stamp collectors, founded in 1886. Membership 7,000. President: Donald F. Lybarger. Executive Secretary: H. Clay Musser. Central Office, P. O. Box 800, State College, Pa. The annual meeting, held in August, is scheduled for Chicago, Ill., in 1946.

Philological Association, American, founded in 1869 for the advancement and diffusion of philological knowledge; incorporated, 1937. Membership: 1,025. President: G. D. Hadzsis. Secretary: S. B. Smith. Schoolcraft, Michigan.

Philosophical Association, The American, founded in 1900 for the promotion of the study and teaching of philosophy in all branches. Membership: 840. Chairman: George P. Conger, University of Minnesota. Minneapolis, Minn. Secretary-Treasurer: Cornelius Kruse. Headquarters: Wesleyan University, Middletown, Connecticut.

The Sixth Series of Carus Lectures was delivered by Professor Morris R. Cohen on the subject: "The Meaning of Human History" at a special meeting of the American Philosophical Association, held in New York City at the City College of New York on May 17 to 18, 1945.

The Seventh Series of Carus Lectures will be delivered by Professor Clarence Irving Lewis on the subject: "Analysis of Knowledge" at the University of California, at Berkeley, December 27 to 29, 1945. The meeting for the reception of the Carus Lectures at Berkeley is also the first resumed meeting of the American Philosophical Association since the restriction of meetings by the Office of Defense Transportation. It is to be a joint meeting of all three Divisions.

Physical Society, American, founded in 1899 for the advancement and diffusion of knowledge of physics. Mem-

bership: 5,000. President-elect: Dr. E. U. Condon. Secretary: Dr. K. K. Darrow. Headquarters: Columbia University, New York 27, N. Y. The annual meeting was in January, 1945, and three other meetings were held during the year.

Physicians, American College of, founded in 1915 as an organization of qualified specialists in Internal Medicine and allied specialties to maintain and advance the highest possible standards in medical education, medical practice and clinical research, to perpetuate the history and best traditions of medicine and medical ethics, and to maintain both the dignity and efficiency of Internal Medicine in its relation to public welfare. Membership: 4 Masters; 4,200 Fellows; 1,800 Associates; total (approx.), 5,500. President: Ernest E. Irons, M.D., Chicago, Ill.; President-Elect: David P. Barr, M.D., New York, N.Y.; Executive Secretary: E. R. Loveland. Headquarters: 4200 Pine Street, Philadelphia. With the conclusion of the war, the program of the college was extended to include awards of Research Fellowships and Clinical Fellowships, the latter especially designed to help its returning member veterans. Also it has a greatly expanded program of postgraduate and refresher courses, organized at medical centers in various parts of the country, and is embarked upon a project to aid its member veterans in their postwar reestablishment in teaching or practice. Other activities include investigation and certification of internists, publication of the *Annals of Internal Medicine*, resumption of its national Annual Sessions, award of the Phillips Memorial Medal for Achievement in Internal Medicine, etc.

Planned Parenthood Federation of America, Inc. (formerly Birth Control Federation of America, Inc.), formed in 1939, by the merger of the American Birth Control League (1921), and the Birth Control Clinical Research Bureau (1923), to foster Planned Parenthood by making birth control information available, under medical direction, through private physicians, hospital and public health clinics, and extra-mural clinics. Special emphasis is being given to medical service for returning members of the armed forces and their wives. Couples desiring advice on infertility are referred to physicians and clinics specializing in such service. Honorary Chairman: Margaret Sanger. President: The Reverend Cornelius P. Trowbridge. National Director: D. Kenneth Rose. Secretary: Mrs. Walter N. Rothschild. Headquarters: 501 Madison Avenue, New York 22, New York. For activities in 1945, see BIRTH CONTROL.

Planning and Civic Association, American, formed in 1935 by a merger of the American Civic Association (1904) and the National Conference on City Planning (1909). It promotes public understanding and support of planning for the best use of land, water, and other natural resources, higher ideals of civic life, and safeguarding of natural wonders, scenic possessions, and recreation facilities. Membership and Subscriptions: 2,000. President: Horace M. Albright. Executive Secretary: Harlean James. Headquarters: 901 Union Trust Building, Washington, D.C. The Association publishes a yearbook, *American Planning and Civic Annual*, and the quarterly, *Planning and Civic Comment*. Holds annually a Citizens Planning Conference, the 1946 Conference to be held in Dallas, Texas, April 22, 1946.

Polish Institute of Arts and Sciences in America, founded in 1942 to establish permanent collaboration between Polish and American scholars, and to assure for the duration of the war the continuity of Polish research work. Membership: 82 active members; 52 corresponding members. President of the Board: Hon. Jan Kucharszewski. Director of the Institute: Prof. Oskar Halecki. Headquarters: 39 East 35 Street, New York, N. Y. Publications: *Bulletin*, published quarterly; *Polish Institute Series* (F vol.). In 1944 the Midwest Branch was organized, with headquarters in Chicago where a first conference was held in 1942 and a second one in Poland: cultural reconstruction in 1945. The Institute has appointed delegates in several Latin American countries and cooperates with Polish research centers of all continents. Each of the five sections of the Institute (historical and political sciences, history of literature and of arts, law and social and economic sciences, pure and applied sciences, and educational problems) is organizing lectures of Polish and American scholars to be held at the headquarters of the Institute at least once a month. Special conferences on the history of East Central Europe, and on the role of the universities in the postwar world were organized in 1943, and a conference on the reconstruction of libraries in 1944. There also were conferences on the nutritional reconstruction of Poland, and on the history of the Polish immigration in the U.S.A. which led in October, 1944, to the foundation of the Polish-American Historical Commission, with a special publication, *Polish-American Studies*.

Polish National Alliance of the U.S. of N.A., a fraternal society founded in 1880. Membership: 800,000. President: I. K. Rozmarek. General Secretary: A. S. Szczerbowski. Headquarters: 1514-20 W. Division Street, Chicago. A convention is held once every four years, and the subsidiary lodges (about 2,000) meet monthly.

Political and Social Science, The American Academy of,

founded in 1889 to provide a forum for the discussion of the great political, social, and industrial problems confronting the world. Membership: 11,500. President: Dr. Ernest Minor Patterson. Secretary: Dr. J. P. Lichtenberger. Headquarters: 3457 Walnut Street, Philadelphia 4. A bi-monthly, *The Annals*, is published. The 1946 annual meeting is scheduled for Philadelphia, April 5-6.

Political Science Academy of, an international learned society founded in 1880, incorporated, 1910. Membership: 9,500. President: Lewis W. Douglas. Ethel Warner, Director. Editor of Publications: John A. Krout. Secretary: Noel T. Dowling. Headquarters, Fayerweather Hall, Columbia University, New York City. At the semi-annual meeting, April 4th and 5th, 1945, in New York City, World Organization—Economic, Political and Social, was the paramount issue discussed. At the annual meeting on November 8th, 1945, the topic considered was European Recovery.

Political Science Association, American, founded in 1903 to foster scholarly interest in the scientific study and improvement of politics and public law, administration, and diplomacy. Membership: 3,450. President: John M. Gaus. Secretary: Kenneth Colegrove. Headquarters: 1822 Sheridan Road, Northwestern University, Evanston, Ill. The Association maintains a Personnel Service indicating the records of young scholars available for appointment. The annual meeting of 1944 was cancelled. The 1945 annual meeting will be held March 28-30, 1946, in Philadelphia, Pennsylvania.

Prevention of Blindness, Inc., National Society for the, founded in 1915, concerned with the control and, where possible, the elimination of the causes of blindness, impaired vision, and eyestrain—not with activities on behalf of those already blind. Aspects of the program recently emphasized included development of eye health and safety practices in industry and the campaign for early detection and treatment of glaucoma. Members and Donors: 30,000. President: Mason H. Bigelow. Executive Director: Mrs. Eleanor Brown Merrill. Secretary: Miss Regina E. Schneider. Headquarters: 1790 Broadway, New York City 19.

Prevention of Cruelty to Animals, The American Society for the (A.S.P.C.A.), founded in 1866. President: Alexander S. Webb. Vice-President-Secretary: Richard Welling. Executive Vice-President: Sydney H. Coleman. Headquarters: 50 Madison Avenue, New York City. The Society maintains a shelter in each borough of New York City, in which it housed 211,147 animals in 1944. Its animal hospital at Avenue A and 24 Street, Manhattan, treats over 10,000 cases a year. An educational program is developed for the schools and for adults. The annual meeting was held Jan. 4, 1945.

Prison Association, American, founded in 1870 to improve laws, law enforcement, and penal and correctional institutions, to study the causes of crime, and to care for and provide employment for paroled and discharged prisoners and probationers. The Association maintains a free clearinghouse of information. Membership: 1000. General Secretary: E. R. Cass. Headquarters: 135 East 15 Street, New York City. The Annual Congress may be attended by anyone who wishes to profit thereby.

Protection of Foreign Born, American Committee for, founded in 1933 to promote better relations between native and foreign born by education, to combat discrimination on the ground of race, nationality, or noncitizenship, to encourage and facilitate naturalization; and to prevent the destruction of American families by deportation. It is not a membership organization, but has 400 annual contributors. Chairman: Hon. Stanley Nowak. Headquarters: 23 West 26th Street, New York 10.

Psychiatric Association, American, founded in 1844 to further the study of mental diseases, to further psychiatric hospitals, education, and research, and to apply psychiatric knowledge to other branches of medicine, to other associations and to public welfare. Membership: 3,659. President: Dr. Karl M. Bowman. Executive Assistant: Austin M. Davies. Headquarters: 9 Rockefeller Plaza, New York, N. Y. The 1946 meeting is scheduled for Chicago, May 27-30. See *PSYCHIATRY*.

Psychical Research, Inc., American Society for, incorporated in 1904 for the scientific investigation of all types of psychical phenomena. Membership: 500. President: Dr. George H. Hyslop. Secretary: Mrs. E. W. Allison. Headquarters: 40 East 84 Street, New York City 16.

Psychological Association, American, founded in 1892 to advance psychology as a science. Membership: 4,500. President: Henry E. Garrett. Executive Secretary: Dael Wolfe. Headquarters: 2101 Constitution Ave., Washington, D. C.

Public Administration, Institute of, founded in 1906 as The Bureau of Municipal Research. The Institute's purpose is to improve the management and operation of American government through the scientific study of public administration, the development of practical ideas and improved procedures in government administration, dissemination of the results of such research to public officials and to citizens generally, and the advancement of training for the public service. Membership: 12. Chairman: Richard S. Childs. Director: Luther Gulick. Headquarters: 684 Park Avenue, New York 21, N.Y.

Public Affairs, Institute of, founded in 1927 to examine and publicize by formal addresses and open-forum discussions important national and international problems. Public sessions from one to two weeks, usually in July. Membership and attendance 3,000 yearly; 39,000 total. Acting Director: Oron James Hale. Secretary: Mary H. Spalding. Headquarters: University of Virginia, Charlottesville, Virginia. Emphasizes student participation through representatives of principal Eastern and Southern colleges. The program of the last (1942) session was built around the theme, "New Strategies for War and Peace." The Institute was suspended for the duration of the war.

Public Affairs Committee, Inc., founded in 1936 to make available in summary and inexpensive form the results of research on economic and social problems to aid in the understanding and development of American policy. Chairman: Ordway Tead. Secretary: S. M. Keeny. Headquarters: 30 Rockefeller Plaza, New York City 20. In their tenth million, there are more than 64 current *Public Affairs Pamphlet* titles.

Public Health Association, American, founded in 1872 to promote and protect public and personal health. Membership: 9,800. President: Dr. John J. Sippl. Executive Secretary: Dr. Reginald M. Atwater. Headquarters: 1790 Broadway, New York, N.Y. During 1945 the Association through its project on Merit Systems rendered service to twenty-two states and two cities in supplying examinations for public health nurses, health officers, laboratory workers, sanitarians, nutritionists, and medical social workers. It distributed its reports on Standard Methods for the Examination of Water and Sewage, and of Dairy Products, Diagnostic Procedures and Reagents, Swimming Pools and Other Bathing Places, Communicable Disease Control, Occupational Lead Exposure and Lead Poisoning, Bacteriological Examination of Shellfish and Shellfish Waters, and on professional qualifications of several types of public health workers. It began a program of accrediting schools of public health beginning with those offering the Master of Public Health degree. Its Committee on the Hygiene of Housing published an appraisal form representing a new technique for selecting those houses which should be replaced for health reasons. Four active subcommittees were at work on positive standards for postwar housing. The Committee on Administrative Practice conducted studies of State health administration, advanced its investigations on public medical care as a responsibility of health departments and published its recommendations with regard to providing minimum essential health services to the entire population through full time local health units serving populations of 50,000. The Committee compiled and published a range of indices of health experiences and practices for a group of 243 communities. The official publication of the American Public Health Association is the *American Journal of Public Health*, now in its 85th volume.

Radio Relay League, Inc., American, a non-commercial association of radio amateurs, founded in May, 1914, and bonded for the promotion of interest in amateur radio communication and experimentation. Membership: 36,725. President: George W. Bailey. Headquarters: West Hartford, Connecticut. Official Organ: *QST*. Publishers of the *Radio Amateur's Handbook* and other radio training aids. Activities of the League in 1945 included additional preparation of radio amateurs for participation in the war effort, further promotion of the War Emergency Radio Service for civilian defense, cooperation with the Federal Communications Commission in the revision of amateur radio regulations for postwar operation, and the institution of a rigorous technical program to adapt war-born radio techniques to amateur communications practice.

Railroads, Association of American, founded in 1934, to deal with matters of common concern in railway operations, maintenance, engineering, research, traffic, accounting, finance, valuation, taxation, law, legislation, transportation economics, and public relations. Membership: 195 railroads in United States, 5 in Canada, 6 in Mexico, and 173 associate members. President: J. J. Peley. Secretary-Treasurer: H. J. Forster. Headquarters: Transportation Building, Washington 6, D. C. See *RAILWAYS*.

Recreation Association, National, founded in 1906 with the following objectives: That every child in America shall have a chance to play; that everybody in America, young or old, shall have an opportunity to find the best and most satisfying use of leisure time. Membership: 11,000. President: Howard Braucher. Headquarters: 815 Fourth Avenue, New York City.

Refugee Service, Inc., National, founded in 1939 to provide complete program of rehabilitation and social adjustment for the 250,000 refugees of all nationalities and creeds in the United States. Membership: 250. President: Charles A. Riegelman. Executive Director: Joseph E. Beck. Headquarters: 105 Nassau Street, New York 7, N. Y. Service in 1945 included: average monthly case load of 2,400; 83,688 migration services; servicing 17,408 requests for location of displaced persons abroad; 3,934 completed locations; placement of 80 doctors and

dentists; 410 job placements. The annual meeting was held Jan. 21, 1946.

Relief for France, American, established 1944 as a unified organization comprising societies throughout the United States which have been engaged in French relief, with representation of international organizations whose programs include aid to French people. It sends food, clothing, pharmaceutical products, emergency supplies, ambulances, to France; supports hospitals, rest homes, welfare and child-feeding centers in France; solicits gifts in-kind of food, clothing, etc., as well as money; is also central registry for child "adoptions" by individuals or groups in the U.S.A. wishing to send packages directly to individuals in France.

Executive Vice-President and Treasurer: Elliott H. Lee. Vice-Presidents: Anne Morgan, Marian A. Dougherty, André Meyer, Howard Sturges. Secretary: W. A. Roseborough. Headquarters, 457 Madison Ave., N.Y.

Relief for Holland, Inc., American, formerly Queen Wilhelmina Fund, Inc., founded in May, 1940 to provide relief for the people of and refugees from The Netherlands and The Netherlands East Indies. A member agency of the National War Fund. Over 200 chapters across the country collect food, used clothing, household equipment, and other needed supplies for shipment to Holland and the East Indies. Sewing and knitting chapters also make new garments from materials purchased with monies provided by the National War Fund. Purchases of emergency food supplies also are made and shipped abroad. During first 9 months operation following liberation of the southern portion of Holland over 7,500,000 lbs. of food, clothing, and other badly needed materials were sent through national headquarters in New York. Headquarters: 465 Fifth Ave., New York 17. Public Relations Office: 670 Fifth Ave., New York 19.

Relief for Norway, Inc., American, an American corporation, founded on Apr. 19, 1940, and directed by Americans for the sole purpose of alleviating distress in Norway. President: Dr. J. A. Aagaard. Headquarters: 135 South La Salle Street, Chicago. Member of National War Fund, Inc. American Relief for Norway has collected \$2,415,750 from the date of its founding to Oct. 9, 1944.

Religious Education, International Council of, founded in 1922 to promote Sunday School work, to encourage the study of the Bible, and to assist in the spread of the Christian religion. Membership: 40 Protestant denominations, 31 state councils of churches and religious education, and 142 city and Provincial councils. President: Harold E. Stassen. General Secretary: Roy G. Ross. Headquarters: 203 N. Wabash Ave., Chicago 1, Illinois. The annual meeting is scheduled for Feb. 10-16, 1946, in Columbus, Ohio.

Rescue and Relief Committee, Inc., International, founded in February, 1942, by a merger of the Emergency Rescue Committee with the International Relief Association, and dedicated to the rescue and relief of anti-fascist refugees in Europe. Membership: over 5,000. Chairman: L. Hollingsworth Wood. Executive Secretary: Sheba Strunsky. Headquarters: 103 Park Avenue, New York, N. Y. Offices in Paris, Rome, Geneva, Stockholm, Istanbul and Mexico City. Meetings are held bi-monthly or as necessary.

Research Council, National, founded in 1916 to "promote research in the mathematical, physical, and biological sciences, and in the application of these sciences to engineering, agriculture, medicine, and other useful arts, with the object of increasing knowledge, of strengthening the national defense, and of contributing in other ways to the public welfare." Membership: about 220, composed in majority of representatives of 85 scientific and technical societies; in addition to about 1,800 members of committees of the Council and its Divisions. Chairman: Ross G. Harrison. Executive Secretary: George B. Darling. Headquarters: 2101 Constitution Avenue, Washington 25, D.C. The Council conducts a wide range of research activities in the medical and natural sciences under the sponsorship or supervision of specially appointed committees. Series of post-doctorate fellowships are administered in the medical and in the natural sciences. A number of publications resulting from work of the Council's Committees are issued each year, either commercially or in the *Bulletin* or *Reprint* and *Circular Series* of the Council. As an operating agency of the National Academy of Sciences, the Council is called upon frequently by agencies of the Government for advice and assistance in connection with many problems of research relating to the war effort. See PHYSICS.

Research Council of Canada, National, founded in 1916 to have charge of all matters affecting scientific and industrial research in Canada which may be assigned to it by the Committee of the Privy Council on Scientific and Industrial Research. Membership: 15. President: C. J. Mackenzie. Secretary: S. P. Eagleson. Headquarters: National Research Building, Ottawa, Canada. The Council's staff of 1,379 at September 30, 1945, including those employed in several laboratory units operated outside of Ottawa, was grouped in laboratory divisions of applied biology, chemistry, mechanical engineering, physics and electrical engineering, a section on research plans and publications and a scientific library and technical information service. Restoration of peace has required

orientation of research towards reconstruction and the application of new knowledge to civilian industrial enterprise. Outside activities included: a research program of more than 70 projects in universities; the granting of 87 scholarships for postgraduate research in 1945-46; and the award of 22 grants in aid to responsible workers for special investigations. Additional grants were made through various Committees of Council, notably for medical research in different hospital centers.

Review of Motion Pictures, Inc., National Board of, an organization founded in 1909 to encourage the best uses of the motion picture recreationally, educationally, and artistically. Membership: 500. President: Quincey Howe. Executive Director: James Shelley Hamilton. Headquarters: 70 Fifth Avenue, New York City.

Rotary International is the world-wide organization of all Rotary Clubs. It is responsible for the administrative supervision of its member Clubs and for the propagation of the Objects of Rotary throughout the world. A Rotary Club is a group of representative men, one from each business or profession in a community, who meet together in fellowship to further the "Ideal of Service," which is thoughtfulness and helpfulness to others in business and community life.

There are now 5,547 Rotary Clubs in more than 60 countries of the world with a membership in excess of 253,000. President: T. A. Warren, Wolverhampton, England. Secretary: Philip Lovejoy, Chicago, Illinois. Headquarters: Chicago, Illinois, with additional offices in London, England; Zurich, Switzerland; and Bombay, India. The official Rotary magazine is *The Rotarian*, which has a Spanish edition, *Revista Rotaria*. There are also numerous regional Rotary magazines published throughout the world in several different languages.

During 1945, Rotary activities included general community-betterment undertakings, work for crippled children and underprivileged children, the establishment and supervision of camps and clubs for boys and girls, assistance to students through scholarships and student loan funds, the promotion of high standards in businesses and professions, and the development of international good will and understanding. In addition, Rotary Clubs actively cooperated with their governments in rationing, salvaging, and fund-raising campaigns, and in all phases of civilian defense, and engaged in activities for the alleviation of war suffering. They also gave special emphasis to the economic and social readjustment of demobilized service men and women and unemployed war workers.

To assist in developing an informed public opinion on vital problems confronting the world, Rotary International provided Rotary Clubs with background information on the Bretton Woods, Dumbarton Oaks and San Francisco Conferences. At the United Nations Conference in San Francisco, 49 Rotarians were in attendance as delegates, advisers, or consultants. To promote understanding of the United Nations Charter, Rotary International published a comprehensive 96-page booklet—*From Here On!*—which contained the complete text of the Charter, together with annotations and challenging questions for the assistance of Rotary Clubs in preparing programs on this subject. The week of November 11-17, 1945, was designated as "United Nations Charter Week" in Rotary, and Rotary Clubs throughout the world devoted their programs that week to a study of the Charter.

The 36th annual convention of Rotary International was held in Chicago, Illinois, in June, 1945. With the conclusion of the war, Rotary Clubs were reorganized, in 1945, in the following countries and regions formerly occupied by the Axis powers, Belgium, France, Norway, the Mariana Islands, The Netherlands, and The Philippines.

Royal Institution of Great Britain, founded in 1799 for the promotion, diffusion, and extension of science and useful knowledge. Membership: about 800. President: The Right Hon. Lord Rayleigh. F.R.S. Secretary A. O. Ranking. F.R.S. Headquarters: 21 Albemarle Street, London, W.1.

Russian Relief, Inc., American Society for, formerly Russian War Relief, Inc., founded in September, 1941, to furnish relief aid to the Soviet people, collect and ship medical supplies, clothing, food, household items and crop seeds to the U.S.S.R. Membership: 40 Board of Directors. President: Edward C. Carter. Honorary Chairman: Allen Wardwell. Secretary: William W. Lancaster. Headquarters: 5 Cedar Street (P.O. Box 185, Wall Street Station), New York City 5. The American Society for Russian Relief, Inc., functions under the President's War Relief Control Board No. 547.

Safety Council, National, founded in 1913 to bring about understanding of the steps necessary to prevent accidents of all kinds and to furnish its members with printed material and information for use in conducting accident prevention work. Membership: 7,234, mainly companies and associations. President: Ned H. Dearborn. Headquarters: 20 N. Wacker Drive, Chicago 6, Ill. Regional Offices: Central, 20 N. Wacker Drive, Chicago 6, Ill.; Eastern, 800 Chrysler Bldg., New York 17, N. Y.; Western, 111 Sutter St., San Francisco 4, Calif.; Southern, 14 Peachtree St., Atlanta 3, Ga.; Washington, 1001 15th St., N.W., Washington 5, D. C. On Sept. 8, 1945, President

Truman called upon the National Safety Council to mobilize safety forces of the nation for a postwar safety campaign against accidents of all kinds. To cooperate in this campaign, the Council has called together national associations and has intensified its own activities in traffic and industrial safety. Special publications, films, and posters were produced and special studies made on several aspects of traffic and industrial safety as they are affected by and as they affect the postwar period. The Council published eight magazines and hundreds of studies on accident prevention methods. It distributed over thirteen million safety posters in 1945 for use in industry, in schools, and public places. It conducted many national safety contests among various groups and issued hundreds of awards. The 1945 National Safety Congress was cancelled due to wartime meeting and travel restrictions. The Congress normally conducted in October attracts more than 10,000 delegates who are representative of every phase of the safety movement in all parts of the country. See ACCIDENTS.

Save the Children Federation, Inc., founded in 1932 as an organization for rural community child service in America and cooperation overseas with Save the Children International Union and affiliates. Chairman: Guy Emery Shipley. President and Executive Director: John R. Voris. Vice President: William N. Haskell. Treasurer: John Q. Tilson. Secretary: A. Broderick Cohen. During 1945 domestic activities were centered in disadvantaged rural areas, operating through 93 county committees to aid especially the children of 670 rural "Sponsored Schools." The overseas postwar program includes a school sponsorship plan in France, Holland, Belgium, Norway and an individual child sponsorship plan in all above mentioned countries plus plan for refugee children sheltered in Sweden. In the United States the Children's Clothing Crusade in the public schools has for its annual goal a minimum of 2,000,000 pounds of clothing. Other needed gifts in kind such as foods and school supplies are secured. The total disbursements—cash and commodities—for the ten months ended October 31, 1945, were \$1,820,142.50.

Savings and Loan League, United States, a trade organization founded in 1892 by the savings, building and loan associations and cooperative banks of the United States, whose assets total \$8,000,000,000 and whose chief business is the lending of money to finance home ownership. Membership: 3,640 associations and 47 affiliated State Leagues. President: Henry P. Irr. Executive Vice President: Morton Bodfish. Headquarters: 221 North LaSalle Street, Chicago. The organization took the lead in 1945 in implementing the home loan provisions of the Servicemen's Readjustment Act so that 85 per cent of the home loans guaranteed for veterans were made by these institutions. Estimated volume for the first year was 50,000 to 60,000. The League instituted a quarterly statistical report on the veterans loans made by member institutions, and collaborated with the American Legion in developing improvements in the machinery for this specialized type of home lending. The League published the 15th of its series of year books, *Savings and Loan Annals, 1944* and consolidated the two savings and loan publications, *Savings and Loans* and *American Savings and Loan News*.

Sculpture Society, National, organized in 1893 to advance the knowledge, creation, and appreciation of good sculpture. The Society cooperates in planning competitions and administers a trust fund which provides loans for sculptors in need. Membership: about 300. President: Donald DeLue. Secretary: Eleanor M. Mellon. Headquarters: 1083 Fifth Avenue, New York. The Lindsay Morris Memorial Prize for 1945 was awarded to Jean deMarco. A competition for sketches for a statue for Our Lady of Victory Church was held. The three prize winners—Miss Mary Lawser, Carl L. Schmitz and Henry Kreis. During the year the Society circulated several exhibitions of enlarged photographs of sculpture, throughout the United States: American Patriots in Sculpture, Ecclesiastical Sculpture, Garden Sculpture and General Sculpture and also two exhibitions in reduced size of American Patriots in Sculpture and Ecclesiastical Sculpture. Mr. John J. Cunningham, Jr. was appointed Educational Director.

Seeing Eye, Inc., The, a philanthropic association founded in 1929 for the purpose of supplying blind persons with dogs trained to act as guides; training and teaching instructors in the science and technique of educating dogs as guides; and educating and training blind persons in the proper use and handling of these dogs. The association trains 150 students annually. 1,200 Seeing Eye dogs have now been placed with blind men and women who came to the school to learn to use them. President: Henry A. Colgate. Headquarters: Morristown, New Jersey. The Seeing Eye, Inc., is supported by annual memberships and contributions. The maximum cost to a civilian blind person is \$150, although the actual cost to The Seeing Eye is many times that amount. Seeing Eye dogs are now supplied without cost to eligible members of the armed forces who have lost their sight in the line of duty.

Small Business Men's Association, Inc., National, founded November, 1937, as a nonpartisan, nonprofit organization to give small business men an effective voice in national

affairs, to protect and advance the American system of free, private enterprise under the Constitution, and to promote the general welfare by collecting and distributing information and data affecting the financial, commercial, civic, and industrial interests of its members and the nation. President: DeWitt Emery. Secretary: James S. Westbrook. Headquarters: 163 North Union Street, Akron, Ohio.

Social Hygiene Association, American, formed in 1914 to combat syphilis and gonorrhea, to fight prostitution and other unwholesome conditions, to promote sound sex education and training for marriage and parenthood, and to protect and improve the American family as the basic social institution. As a participating service of the National War Fund, the Association's major resources were devoted during the war to helping maintain the lowest possible venereal disease rates, to protecting industrial workers and members of the armed forces from prostitution and related conditions and to mitigating the deleterious effects of war on young people. Membership: 150 organizations, approximately 18,000 individuals. President: Dr. Ray Lyman Wilbur. Executive Director: Dr. Walter Clarke. Headquarters: 1790 Broadway, New York 19, New York. Services include advice and consultation; surveys, production, and distribution of literature, films, and other materials. National Social Hygiene Day sponsored annually is marked by more than 5,000 meetings throughout the country. The William Freeman Snow medal for distinguished service in the social hygiene field is presented to an outstanding person each year on the occasion of the Association's Annual Meeting in New York City.

Social Science Research Council, a corporation organized in 1923 to promote the development of the social sciences. Membership: 21 directors elected or appointed by seven national social science societies, 9 directors-at-large elected by the board of directors; all former directors, numbering 66 in 1945, retain membership in the corporation. Chairman: E. W. Burgess. Secretary: Shepard B. Clough. Treasurer: Shelby M. Harrison. Executive Director: Donald Young. Headquarters: 230 Park Avenue, New York 17. During 1944-45 nine committees were engaged in planning and promotion of research; 23 grants-in-aid of research and 61 fellowships were awarded.

Social Work, National Conference of, founded in 1873 to facilitate discussion of the problems and methods of practical human improvement, to increase the efficiency of organizations devoted to this cause, and to disseminate information. Membership: 6,000. President: Kenneth L. M. Pray. General Secretary: Howard R. Knight. Headquarters: 82 N. High Street, Columbus 15, Ohio.

Social Workers, American Association of, founded in 1921 to formulate and establish standards of personnel and of conditions under which social work is practiced, to seek to establish satisfactory conditions for the organization and administration of social services, to encourage through its membership requirements proper and adequate basic preparation and training for social work practice, to disseminate information concerning the profession, and to conduct investigations which contribute to an understanding of social welfare needs. Membership: 10,500. President: Mrs. Irene Farnham Conrad. Executive Secretary: Joseph P. Anderson. Headquarters: 180 East 22 Street, New York City 10.

Sociological Society, The American, founded in 1905 to encourage sociological research, discussion, teaching, and publication. Membership: 1,300. President: Carl C. Taylor. Secretary: Conrad Taeuber. Headquarters: U.S. Department of Agriculture, Washington 25, D. C. The Society issues the bi-monthly journal, the *American Sociological Review*.

Special Libraries Association, founded in 1909 as an international organization of librarians and information experts who serve manufacturing concerns, banks, corporations, law firms, newspapers, advertising and insurance agencies, transportation companies, research organizations, museums, hospitals, business branches and other departments of public and university libraries, government bureaus, associations, and other organizations in the fields of business, medicine, the sciences, technology, social welfare, and the arts. Membership: 8,836. President: Herman Henke. Secretary: Kathleen B. Stebbins. Headquarters: 81 East 10th Street, New York 9, N. Y. Publications: *Special Libraries*, published monthly from September to April, with bi-monthly issues from May to August; sponsored periodical, *Technical Book Review Index*, issued ten times a year, September to June. *Special Library Resources*, vol. 1, was published in 1941, with three additional volumes planned for 1946 publication. Other recent publications are: *War Subject Headings for Information Files*; *Handbook of Commercial, Financial and Information Services*; *Source List of Selected Labor Statistics*; *A List of Subject Headings for Chemistry Libraries*, and *Classification and Cataloging of Maps and Atlases*. An annual convention is held each year, usually in June. The 1946 Convention is scheduled for Chicago, Illinois.

Standards Association, American, a federation of national groups dealing with standardization, founded in 1916. Membership: 68 trade associations, technical socie-

ties, and government departments and some 2,000 industrial concerns, who hold membership directly or by group arrangement. President: Henry B. Bryana. Secretary: P. G. Agnew. Headquarters: 70 East 45th Street, New York 17, N. Y. The number of standards approved by the Association emergency procedure for American War Standards, greatly increased during 1945. The A.S.A., in addition to its regular peacetime work, approved 151 war standards. All aim ultimately at developing greater national efficiency. See PHOTOGRAPHY.

State Governments, The Council of, a joint governmental agency established in 1925 by the states to serve as a clearinghouse of information for public officials and legislators, to encourage cooperation among the states and between the states and the Federal Government, and to make state government more effective. President: Gov. Edward Martin; Executive Director: Frank Bane. Headquarters: 1813 East 60th Street, Chicago 37. The Council has cooperated with Federal and State governments in resolving many problems of a war and postwar nature including civilian defense, rationing, transportation, finance and intergovernmental fiscal relations, crime control, juvenile delinquency, interstate trade barriers, public welfare, conservation of natural resources, postwar reconstruction and development, unemployment compensation, education, and others. The Council is also the secretariat of the Governors' Conference, the American Legislators' Association, the National Association of Attorneys General, the National Association of Secretaries of State and the National Association of State Budget Officers. Membership, 48 states. See STATE LEGISLATION.

Statistical Association, American, founded in 1839 as a scientific and educational organization of persons seriously interested in the application of statistical methods to practical problems, the development of more useful methods, and the improvement of basic statistical data. Membership, 8,500. President: Isador Lubin. Secretary: Lester S. Kellogg. Headquarters: 1603 K Street, N.W., Washington 6, D.C.

Statistical Institute, Inter American, founded May 12, 1940, to foster statistical development in the Western Hemisphere. Individual members: Constituent, 77; ex officio, 24; institutional members. Adhering governments, 17 (Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Panama, Peru, United States, Venezuela); affiliated organizations, 2; special affiliates, 4. President of the Bureau (Executive Committee): M. A. Teixeira de Freitas, Rio de Janeiro. Headquarters of Permanent Office: Washington, D.C. There are five standing committees—on current publications, Inter-American statistical yearbook, statistical education, demographic statistics, and projects review, respectively. Principal activities are: (a) quarterly journal; (b) yearbook, (c) maintenance of statistical source files and issuance of bibliographical materials; (d) maintenance of biographical information on statistical persons in the Western Hemisphere; (e) maintenance of a microfilm exchange service on statistical materials; (f) technical program in subject matter fields. Technical work is carried on principally by statisticians loaned by their governments to the IASI for periods of one year each. The quarterly professional journal, *Estadística*, 11 numbers of which had appeared up to November 30, 1945, is published in Mexico. Detailed plans for an inter-American statistical yearbook have been completed, the final volume to be issued early in 1947; existing national income estimates for the Latin American nations have been studied and evaluated, a survey of the methods used in the last population census of each American nation has been completed and published, and preliminary plans developed for a continental population census in 1950 with minimum standards; a survey of methods used in agricultural production statistics has been made (now in preparation for final publication); an International Foreign Trade Classification scheme has been adapted to American trade purposes. Surveys have been launched but are still incomplete in (a) industrial production statistics, (b) statistical training methods, and (c) vital statistics methods and procedures. A second edition of the Directory of Statistical Personnel in the American Nations was released in the spring of 1944. The preliminary edition of a *Bibliography of Selected Statistical Sources in the Western Hemisphere* has recently been published and is currently being examined by a group of specialists prior to the issuance of a definitive edition for sale.

Sunday-School Union, American, (founded in 1817 and renamed in 1824) "to establish and maintain Sunday-Schools and to publish and circulate moral and religious publications." Thirty-six laymen constitute the Board of Managers. President: Belding B. Sifer, Secretary and Treasurer: John H. Talley. Headquarters: 1816 Chestnut Street, Philadelphia 3, Pa. More than 160 Missionaries serving non-denominational, Union Sunday-Schools where there is no other established evangelical, Christian work; also holding Bible conferences and Daily Vacation Bible Schools in their Districts.

Surgeons, American College of, founded by surgeons of the United States and Canada in 1913 to advance the science and the ethical and competent practice of surgery,

to establish hospital standards, to engage in research, to aid in better instruction of doctors, to formulate standards of medicine, and to improve all adverse conditions surrounding the ill and injured wherever found. Membership: 13,500. President: W. Edward Gallie. Chairman of the Board of Regents: Irvin Abell. Headquarters: 40 East Erie Street, Chicago. Twenty-one sectional war sessions were held in 1944. Regional and national meetings were cancelled in 1945. Regional meetings are scheduled in 12 cities in January, February and March, 1946, and a Clinical Congress for November, 1946.

Swedish Historical Museum, American, established in 1926, owned and operated by the American Swedish Historical Foundation. Its purpose is to preserve the history and the culture of Americans of Swedish ancestry, as well as their contributions to American life, and as such it is the outstanding repository in the United States. Its annual program includes current exhibitions, lectures, receptions to distinguished guests, and two festive occasions: the Lucia celebration and the Spring Fete. The Museum is also custodian of one of Philadelphia's oldest houses—"The House on Queen Christina's Land-Grant." Headquarters, 19th Street and Pattison Avenue, Philadelphia 45, Pennsylvania. Membership, 2,000. Officers: Emil Tyden, President. William L. Batt, Henry Ericsson, Samuel P. Wetherill, Carl R. Chindblom, Vice-Presidents. Ormond Rambo, Jr., Vice-President and Treasurer. Axel Johan Upvall and Adolph B. Benson, Recording and Corresponding Secretaries. Maurice A. Hogeland, Assistant Treasurer. Miss Elizabeth S. Swenson, Executive Secretary.

Tax Association, National, founded in 1907 to promote the discussion and dissemination of educational and scientific information on tax questions. Membership, 1,500. President: Dixwell L. Pierce. Secretary: Raymond E. Manning. Headquarters: % Library of Congress, Washington, D.C.

Tax Foundation, Inc., founded in 1938 to administer funds for the furtherance of science in taxation, efficiency in public administration, and economy in public finance, to collect data, make studies, conduct surveys, research projects, and demonstrations, to publish periodicals and issue other literature; and to further public understanding germane to these premises. Chairman: William B. Warner. Executive Director: Charles O. Bauer. Headquarters: Room 1420, 30 Rockefeller Plaza, New York City 20.

Tax Institute, Inc., founded in December, 1932, to serve as a national citizen's bureau of tax information. Membership, 1,100. President: Mark Eisner. Executive Director: Mabel L. Walker. Headquarters: 150 Nassau Street, New York 7, N. Y. During 1945 the following publications were issued: monthly issues of *Tax Policy*, semi-monthly issues of *Taxes for Democracy*, and quarterly *Tax Institute Bookshelf*.

Testing Materials, American Society for, a technical Society founded in 1898 to promote knowledge of the materials of engineering and to standardize specifications and methods of testing. Membership: 5,700. President: J. R. Townsend. Executive Secretary: C. L. Warwick. Headquarters, 260 S. Broad Street, Philadelphia 2, Pa. During 1945 the Society continued its extensive standardization and research in the field of engineering materials and issued numerous emergency specifications and emergency alternate provisions in existing standards to expedite the procurement of materials and to conserve strategic materials. The 1945 Annual Meeting (48th) was held in New York, N. Y., June 27. The 1946 Spring Meeting and Committee week will be held in Pittsburgh, February 25 to March 1.

Textile Foundation, The, an organization founded in 1930 to do scientific and economic research for the benefit of the textile industry. Chairman of Board of Directors: Franklin W. Hobbs. Secretary: Edward T. Pickard. Headquarters: Industrial Building, National Bureau of Standards, Washington, D. C. Fundamental research laboratories are at Princeton, N. J. Publication office is at Kent, Conn.

Theater Wing War Service, Inc., American, founded as a nonprofit war service organization to further the war effort of the United Nations. It represents the entire entertainment world, including stage, screen, radio, vaudeville, music, and all the allied crafts. Membership: about 50,000. President: Rachel Crothers. Chairman of the Board and Secretary: Antoinette Perry. Headquarters: 730 Fifth Avenue, New York 10, N. Y.

By the end of the year the famous Stage Door Canteens of the American Theatre Wing in the United States were closed, or scheduled for closing. Last to shut its doors was the Washington canteen (January 23, 1946). The London Stage Door Canteen remained the outpost—to serve men still overseas.

Other hospitality centers, like the Club for Merchant Seamen with its Ticket Committee and subsidiary services of sketching by famous illustrators, language lessons, Ship's Libraries and the rest, shut down by the end of November. And the Servicewomen's Tea Dances, which had been given every Sunday in the Hotel Roosevelt Grill, ended shortly before Christmas.

The accent of the Wing's interest shifted to Hospitals,

where experimental work had been carried on for more than two years in close cooperation with the medical and military authorities and the Red Cross. The character of the Wing's hospital activity had been different from any other then in operation. Instead of carrying entertainment directly to the base hospitals of the area, the Wing had worked to develop types of entertainment designed for hospitals. These included special party-evenings, novelty evenings, programs of sports, radio techniques, motion picture tests, etc., and ward entertainment which included important singers, cartoonists, magicians, expert instruction in hobbies and a wide variety of entertainment in, and out of, the theater, proper.

This work, at the end of 1945, was expanded to include all theater activity operating in hospitals including United Theatrical War Activities programs. All others were brought under the Wing to be redesigned for special hospital shows. This included tabloid versions of current musical shows and also vaudeville. It is the plan of the Wing to continue the Hospital activities for many years. (Another distinctive characteristic of the Wing's hospital program was its policy of 'No publicity'.) In the expansion, branches of the Wing which had operated canteens in other cities undertook to set up Hospital Committees coordinated with the main one in New York. Most notable of these were in Cleveland and Boston.

The Cape Cod Branch of the American Theatre Wing continued its service of supplying homely necessities to outposts in New England but, during the year, this branch extended its hospital service and, through a special campaign over the radio and through the theater, managed to provide portable radios for all ward cars in all hospital trains operating in the United States in addition to providing large numbers of console radios for base hospitals in the Northeastern area. In addition, it conducted a campaign to provide musical instruments for various units of the Army, Navy, Amphibious Forces.

The Workroom, by the end of the year, finished off clothing drives for Europe, the Greek actors and actresses, Army and Navy Relief, a special Philippine Relief drive and limited its activities to work for the hospitals.

The Speakers' Bureau and Victory Players keynoted the last War Bond drive with speakers and special sketches widely used by the Treasury Department and, after that, centered its activities upon the educational campaign for the Returning Veteran.

By the end of the year a special committee from the Board of the Wing was studying a plan for giving counsel or retraining to servicemen within the entertainment industry, hopeful of reinstating themselves in their profession. This was a development—in reverse—of the War Production Training Committee, which had undertaken to convert theater skills into war production.

Town Hall, Inc., founded in 1894 to establish a nonpartisan, nonsectarian educational institution for the advancement and study of science, the arts, social, political and industrial problems, and to aid in the development of good citizenship and sound municipal government. Membership: 2,500. President: George V. Denny, Jr.; Educational Director: Paul H. Sheats; Administrative Assistant to the President, Orville Hitchcock; Vice President-Comptroller, William Steinhoff; Secretary: Gaylord Davis. Headquarters: The Town Hall, 123 West 43rd Street, New York City. Outstanding events during 1945-46, fifty-first season, included a series of morning lectures Mondays, Wednesdays, and Saturdays from November through March; a series of Town Hall Workshops and Short Courses; a broadcast of "America's Town Meeting of the Air" each Thursday evening over the American Broadcasting Company network.

Trade Association Executives, American, formed in 1920 as a means to establish a better and wider public understanding of the purposes and functions of responsible trade associations, the professional standards of service and conduct which they maintain, and character of service rendered; and provides a common ground where men and women representing trade associations may pool their interests and share in the interchange of information and opinion. Membership, nearly 900. President: Richard P. White, Executive Secretary: Ruth I. Mulroy. Headquarters: 1427 Eye Street, N.W., Washington, D. C. The Annual Meeting for 1945 was held at the Hotel Stevens, Chicago, Illinois, November 15, 16, and 17th, 1945.

Transportation Association of America, founded in April, 1935, to carry out research and education in matters pertaining to transportation, dedicated to the preservation of private ownership and to the formulation and effectuation of a sound national transportation policy. President: Sydney Anderson; Secretary: E. O. Krogh. Headquarters: 105 West Adams Street, Chicago 3.

Travelers Aid Association, National, an organization founded in 1917 to promote throughout the country means of cooperation and to improve the standards of Travelers Aid Service, to study the causes of migration, and to encourage a public understanding of moving people. Travelers Aid Service includes individualized information, travel and short contact service to travelers and other persons in difficulty away from their homes. Membership: operating members—98 Travelers Aid Societies

providing Travelers Aid services in 427 communities; cooperating members—850 organizations and individuals on call for Travelers Aid service in 1,123 places where no regular Travelers Aid Society exists; associate members—individuals and organizations interested in supporting Travelers Aid services. President: Randall J. LeBoeuf, Jr. Secretary: Eleanor D. Gillespie. Headquarters: 425 Fourth Avenue, New York 16, N.Y. A biennial convention is scheduled to be held in 1946. During 1945, as a member agency of the United Service Organizations, Inc., the National Travelers Aid Association operated for the use of members of the armed forces and war production workers: 146 USO Travelers Aid Service Units serving 256 communities and 165 Troops in Transit Lounges.

Tuberculosis Association, National, founded in 1904 for the study and prevention of tuberculosis. Membership: approximately 8,000. President: Will Ross. Secretary: Dr. Charles J. Hatfield. Headquarters: 1790 Broadway, New York City 19. In 1945 the Trudeau Medal was awarded to Dr. Florence R. Sabin. Because of travel restrictions, no annual meeting was held in 1945.

United China Relief, Inc., organized in February, 1941, to raise funds for relief and rehabilitation in China, and also to promote understanding and cooperation between the peoples of America and China. Honorary Chairman: Paul G. Hoffman. Chairman: Charles Edison. Vice Chairman: Eugene E. Barnett, and George Whitney. President: James L. McConaughy. Vice-Presidents: Dwight W. Edwards, and B. A. Garside. Treasurer: James G. Blaine. Secretary: B. A. Garside. Headquarters: 1790 Broadway, New York City 19. United China Relief is a coordination of the activities of nine Participating and Affiliated Agencies which by further amalgamations have now been reduced to six as follows: American Bureau for Medical Aid to China, American Friends Service Committee; Associated Boards for Christian Colleges in China, China Aid Council; Church Committee for China Relief; and Indusco (American Committee in Aid of Chinese Industrial Cooperatives). United China Relief is a member agency of the National War Fund, Inc.

United Nations, Inc., American Association for the, formerly the League of Nations Association, founded in 1923 to teach the need for the cooperation of all nations in building an international organization as the essential basis of peace, now exclusively devoted to studies and popular education activities on the United Nations. Membership, 10,000. President: Dr. William Emerson. Director: Clark M. Eichelberger. Headquarters: 45 East 65th Street, New York 21, N.Y. Research affiliate: The Commission to Study the Organization of Peace. The Association and the Commission publish expert reports and popular material in connection with a three-fold program of education: (1) on the United Nations and its specialized agencies, (2) on American foreign policy to make effective United States membership in the United Nations; (3) on necessary revision of UNO and its agencies to meet the changing needs of a changing world. The Twentieth Annual National High School Contest on the organization of peace will be held April 12, 1946. Services national and local groups with speakers, recordings, program and teaching aids, press and feature material. Monthly magazine, *Changing World*.

United Seamen's Service, Inc., founded Sept. 1, 1942, to provide for merchant seamen rest centers, residential and recreation clubs, personal service, and any other aids necessary to the health, morale, and general welfare of officers and men of the merchant marine both in the United States and abroad. Chm. of the Bd.: Admiral Emory S. Land, Pres. William S. Newell. Secy: Miss Clara A. Kaiser; Exec. Dir: Douglas P. Falconer. Headquarters: 89 Broadway, New York City 6. On Oct. 1, 1945, USS was operating in 21 ports in the United States and 38 overseas. In these ports it had 118 different facilities consisting of residential and recreational clubs, personal service offices, port medical offices and rest centers for seamen needing care after hospitalization or the tension of wartime sea duty. As war fronts advanced during 1945, centers were opened in Germany, Japan, and China to give services to seamen carrying supplies to fighting armies and occupation troops. The annual meeting of the board will be held in New York City, Apr. 2, 1946.

University Professors, American Association of, a professional organization of college and university teachers and investigators, founded in 1915 to facilitate more effective cooperation among the members of the profession, to promote the interests of higher education and research, and to increase the usefulness and advance the standards and ideals of the profession. The nature of its work is indicated by the titles of the committees, which include Academic Freedom and Tenure, Freedom of Speech, International Relations, Educational Standards, Author-Publisher Contracts, Professional Ethics, Relation of Junior Colleges to Higher Education, Cooperation with Latin American Universities, Pensions and Insurance, Preparation and Qualification of Teachers, Encouragement of University Research, Library Service, Place and Function of Faculties in College and University Government, and the Economic Welfare of the Profession. Membership:

about 18,000. President: Quincy Wright. General Secretary: Ralph E. Himstead. Headquarters: 1155 Sixteenth Street, N.W., Washington 6, D.C.

University Women, American Association of, founded in 1882 for practical work in education, especially the raising of standards in higher education for women. Membership: over 80,000, organized in State divisions and in 920 local branches. President: Dr. Helen C. White. General Director: Dr. Kathryn McHale. Headquarters: 1634 I Street, N.W., Washington 6, D.C. The Headquarters staff and national committees, comprised of experts in their fields, give leadership in developing a program of study and appropriate action which is carried out by local, state, and national units. The program is directed toward these general objectives: development of democratic education; international cooperation to bring about a peaceful world society; solution of economic and social problems to promote the welfare of all; enlargement of opportunities for women and full use of their abilities; development of the arts. The Association gives fellowships, international and national, for women. As a member of the International Federation of University Women, it is active in various projects for better understanding and friendship among university women of the world.

Urban League, National, an interracial organization, founded in 1910, which works to improve living conditions among Negroes in urban communities throughout the United States; the League operates through local affiliates in 53 key industrial centers which have interracial boards and committees staffed by professional trained workers. Membership, about 20,000. President, William H. Baldwin; Executive Secretary, Lester B. Granger; General Secretary, Eugene Kinckle Jones. Headquarters: 1188 Broadway, New York 10, N.Y. During 1945 through V-J Day, the League continued its program of emphasizing the policy of wider and fairer use of Negro manpower in the armed forces and industry to aid in the war effort. After V-J Day, the League placed its emphasis on the continued employment of Negroes on the basis of skills acquired and potential in reconversion. Awarded two fellowships making four maintained for school year 1945-46—3 in social work and 1 in Vocational Guidance and Personnel Administration. The League publishes *Opportunity*, *Journal of Negro Life*, and occasional papers on problems of racial contact. The 1946 Annual Meeting to be held in New York February 18th.

Veterans of Foreign Wars of the United States, The first postwar "United Nations Veterans Victory Conference" highlighted the 46th National Encampment, Veterans of Foreign Wars of the United States, Chicago, October 1-2-3-4. Representatives of 22 countries, mainly combat veterans of World War II, were brought to Chicago from all parts of the world as guests of the Veterans of Foreign Wars for a two-day meeting which may pave the way for international cooperation, among veterans of the United Nations, for the preservation of world peace. Although the conference was planned and sponsored by the Veterans of Foreign Wars, it was recognized by the State Department with the presence of an official representative in behalf of Secretary of State James Byrnes. He was Ambassador Boas Long, former Minister to Guatemala. Messages endorsing the purposes of the conference were received from President Harry S. Truman, Prime Minister Attlee of Great Britain and Generalissimo Chiang Kai-shek of China.

The delegates adopted resolutions in which they pledged themselves to call upon the veterans of their respective countries to help mobilize public opinion in support of the objectives of the United Nations Charter. They also voted to establish an information center in Washington, D.C. which will serve as a clearinghouse for communications between the veterans of the United Nations. They further recommended that the use of the atomic bomb be placed at the disposal of the Security Commission of the United Nations.

The delegates to the V.F.W. 46th National Encampment endorsed peacetime compulsory military training; advocated government control of the atomic power research; urged the establishment of an independent agency for foreign intelligence and espionage; reiterated endorsement of the United States participation in an international association of nations to prevent future wars; urged prompt return of enemy prisoners of war and temporary alien war refugees to their homeland.

On internal affairs, the V.F.W. urged Congress to seek a high level of full employment through use of the free enterprise system and incentive taxation, rather than by government guarantee of jobs and spending. The construction of self-liquidating super highways was urged.

On veteran welfare, the V.F.W. reaffirmed its recommendation that the Government should grant adjusted service pay to all World War II veterans, in recognition of the basic fact that an estimated eight million World War II veterans will not benefit by the G.I. Bill of Rights. Congress was also urged to liberalize existing provisions of the G. I. Bill, particularly those dealing with the loan clause and educational aid. Early and orderly demobilization of the Armed Forces, with preference and priority based on length and type of service, was also urged.

The annual Reports of Officers spotlighted the growth of the organization since Pearl Harbor. In 1941, the membership strength of the V.F.W. was less than one-quarter million. This year the membership exceeds one million, which includes approximately 750,000 World War II veterans. The total number of local units reached 4,500 in 1946, a new high in V.F.W. history. In the past 12 months 900 new Posts were chartered. The expansion program of the organization has a total of 12,000 Posts for its goal by the close of 1946.

Veterinary Medical Association, American, founded in 1863 to promote veterinary science and its proper application. Membership: 9,000. President: James Farquharson. Secretary: J. G. Hardenbergh. Headquarters: 600 South Michigan Ave., Chicago 5, Ill. The International Veterinary Congress prize for distinguished service to the veterinary profession was awarded in 1945 to Dr. L. A. Merrill, 600 S. Michigan Ave., Chicago 5, Ill. The Borden Award for 1945 for outstanding research contributing to the control of dairy-cattle disease was awarded to Dr. W. L. Boyd, University Farm, St. Paul 8, Minn. The Humane Act Award for 1945 was awarded to Tim Suter of Pittsburgh, Pennsylvania. The 1945 meeting was held in Chicago.

Vocational Association, Inc., American, founded in 1925 with the conviction that occupational education is a primary right and privilege of every citizen. Membership: 25,000. President: M. D. Mobley. Executive Secretary: L. H. Dennis. Headquarters: 1010 Vermont Avenue, N. W., Washington 5, D. C.

Vocational Guidance Association, Inc., National, founded in 1913 to unite persons engaged or interested in any phase of vocational guidance and occupational adjustment. Membership: 4,000. President: M. R. Trabue. Executive Secretary: Christine Melcher. Headquarters: 82 Beaver Street, New York 5, N. Y. Official journal *Occupations*, the Vocational Guidance Journal, published monthly October through May. The organization functions through 75 branches, in 37 States, 2 territories, and Canada; national committees specializing in various phases of vocational guidance; regional conferences. Current activities are concerned with school-work programs, plans for postwar occupational adjustment and rehabilitation, and cooperation in promoting vocational guidance in Latin America.

Weights and Measures, American Institute of, founded in 1916 to defend the English system of weights and measures against pro-metric propaganda and to be educational in respect of the use of weights and measures. President: W. R. Ingalls. Secretary: Robert F. Cogswell. Headquarters: 33 Rector Street, New York City.

Wildlife Institute, American, an educational and scientific organization incorporated in 1935 for the conservation and restoration of North American wildlife. President: Frederic C. Walcott. Secretary: O. R. Gutermuth. Headquarters: 822 Investment Building, Washington, 5 D. C. The Institute participates in 12 cooperative game management, wildlife research projects in the several states, Canada and Mexico. It sponsors the annual North American Wildlife Conferences and publishes the Transactions of meetings conducted at the Conferences. The Institute publishes books on wildlife subjects and assists in the publication of bulletins, booklets and leaflets relating to the conservation or wise use of natural resources. It promotes conservation, education, and research through the issuance of college fellowships and grants in aid, and advances conservation education by disseminating practical literature and press releases designed to encourage proper use of limited resources and restoration of renewal assets.

Women's Association, American, founded in 1922 to provide for women engaged in commercial and professional pursuits, facilities for business and social contacts, and opportunities for recreation, mental stimulus, and physical betterment; to advance the economic, cultural, and social interests of women in their chosen fields of endeavor; and to maintain in the City of New York and elsewhere a clubhouse or other club quarters. Membership: 600. Pres. Natalie W. Linderholm, Sec. Elizabeth Kelley. Headquarters: The Barclay, 111 East 48 Street, New York City 17. Events of 1945 included the annual Association meeting in April, and Association meetings in Feb., Sept., and Dec. At the 19th Annual Friendship Reunion Dinner in November the Annual AWA Award for eminent achievement was presented to Pauline E. Mandigo. Recognition as AWA Woman-of-the-Month was accorded Jane H. Todd in September, Anne Morgan in October, Dr. Barbara B. Stimson in November and Pauline E. Mandigo in December. The winner of the Anna W. Porter Memorial Award was Maude K. Wetmore.

Women's Christian Temperance Union, National (WCTU) founded in 1874 to unite Christian women of the United States for the education of public sentiment in favor of total abstinence from the use of all alcoholic liquors, and to train youth in habits of sobriety. Membership: about 400,000. President: Mrs. D. Leigh Colvin. Secretary: Miss Lily Grace Matheson. Headquarters: 1780 Chicago Avenue, Evanston, Illinois. To develop a working personnel, an organization training school is held yearly at Headquarters, Evanston, Ill. To train teachers to super-

vise narcotics education in schools, a three months' winter seminar is held in Evanston and summer credit courses in various colleges as well as courses at Evanston and Chautauqua are given. A round table for graduates is held at Headquarters at Christmas time. Increased gifts and purchases brought the collection in the Frances Willard Library up to 8,800 volumes and a similar number of pamphlets and manuscripts, making it the largest alcohol reference library in the world now open to scholars and specialists in this field. Children's and youth's activities were strengthened through accelerated programs of the Loyal Temperance Legion and the Youth Temperance Council. The slogan adopted for 1946 is "Unite all the family for temperance."

Women Artists, Inc., National Association of, founded in 1889 to exhibit and display works of art by contemporary artists. Membership: 800. President: Mrs. Arthur Ellis Hamm. Executive Secretary: Josephine Droege. Headquarters: the Argent Galleries, which the Association maintains, 42 West 57 Street, New York City. The Association sponsors an Annual Exhibition, at which a number of prizes are awarded, general exhibitions, rotary shows, a sketch class, lectures, etc. The annual open meeting is held at the headquarters the second Wednesday in April.

Women's Clubs, General Federation of, founded in 1890 to unite the women's clubs and like organizations throughout the world for the purpose of mutual benefit, and for the promotion of their common interest in education, philanthropy, public welfare, moral values, civics and fine arts. Membership: 2,500,000 women in 16,500 clubs. President: Mrs. LaFell Dickinson. Headquarters: 1734 N Street, N.W., Washington, D.C. In April, 1944, a nation-wide "Youth Conservation" program was launched aimed at an integration of effort on the part of all national, State, and local agencies interested in the youth field. Mrs. LaFell Dickinson represented the General Federation at the San Francisco Conference on International organization as Consultant to the United States Delegation. Major legislative efforts were directed toward securing renewal of the Trade Agreements Act and ratification of the United Nations Charter. The Federation's special bond selling campaign resulted in war bond sales by clubwomen totaling \$154,459,132. Other activities included war service, recruitment for the Women's Land Army and participation in the United National Clothing drives and the Victory Loan drive.

Women Voters, National League of, established in 1920 to promote political education through active participation of citizens in government. Membership: 35 affiliated State Leagues and over 550 local Leagues. President: Miss Anna Lord Strauss. Secretary: Mrs. Daniel E. Earley. Headquarters: 726 Jackson Place, Washington 6, D. C.

World Alliance for International Friendship through the Churches, founded in 1914 to promote international goodwill and peace. Membership: about 1,000. President: Rt. Rev. G. Ashton Oldham. General Secretary: Henry A. Atkinson. Headquarters: 70 Fifth Avenue, New York 11, N. Y. The organization publishes a monthly *News Letter*; *Pattern for Peace—Catholic, Jewish and Protestant Declaration on World Peace, Crossroads of Conflict, World Alliance Purpose and Program*. Broadcast Series: *The Resources of Religion in World Organization, Educating for World Order, Palestine in War and Peace*.

World Calendar Association, Inc., founded in 1930 to study the defects of the present calendar and to educate the public on the benefits of calendar revision and the advantages that would result from adoption of The World Calendar, a perpetual stabilized balanced calendar, always the same, of 12 months with increased emphasis on the division of the year into four equal quarters. President: Elisabeth Achelis; Vice President: Charles S. McVeigh; Secretary-Treasurer: Harriet Lillie; and Director: Westy Egmont. International Headquarters: International Building, 630 Fifth Avenue, New York City 20. The World Calendar Association publishes the *Journal of Calendar Reform*, a quarterly periodical, of which Westy Egmont is the Editor. The World Calendar has been approved by 14 nations, many organizations and distinguished scientists, scholars, economists, businessmen, religious leaders, and government officials.

World Peace Foundation, established in 1910 to promote international order and peace through publications, study groups, and a reference service. President: George H. Blakeslee. Director: Leland M. Goodrich. Headquarters: 40 Mt. Vernon Street, Boston 8, Mass. The Foundation published in 1945: Volume VI of *Documents on American Foreign Relations*, Edited by Leland M. Goodrich and Marie J. Carroll; *The Netherlands and the United States*, by Dr. Bernard H. M. Vlekke; *Bretton Woods: Clues to a Monetary Mystery*, by Carlyle Morgan; *World Policing and the Constitution: An Inquiry into the Powers of the President and Congress, Nine Wars and a Hundred Military Operations, 1789-1945*, by James Grafton Rogers; and *The United Nations in the Making: Basic Documents*. The following titles are scheduled for 1946: Volume VII of *Documents on American Foreign Relations*, Edited by Leland M. Goodrich and Marie J. Carroll; Volume II of *War and Peace Aims of the United Nations*, Edited by Louise W. Holborn; *United Nations Economic and Social*

Council, by Dr. Herman Finer; *Our Peace with Japan*, by Frans H. Michael; and *The Charter of the United Nations: Documents and Commentary*, by Leland M. Goodrich and Edward Hambro.

Young Men's Christian Associations, The National Council of (Y.M.C.A.), formed as a national committee in 1866. The first local organization was formed in London in 1844 (in the United States in 1851) for the physical, mental, social, moral and religious education of youth. Membership, 1,295,393 in 1,267 local Associations. President: Howard A. Coffin. General Secretary: Eugene E. Barnett. Headquarters: 347 Madison Avenue, New York City. Major emphasis in 1945 included continued service to young men in military and related defense service as one of six agencies composing the United Service Organizations, with responsibility for operating 510 clubs and centers, in addition to expanding regular facilities everywhere. Also conducted service to prisoners of war in 33 countries at a cost of over \$9,000,000 through World's Alliance. The North American Y.M.C.A.'s have continued for fifty-six years a program of international cooperation in thirty-two countries. With the end of the war the Association continues the policies of assisting youth and adults to play their part as Christians in the struggle for freedom and a world of justice, peace and order; sharing with churches, educational and government agencies in creating a public opinion that will assure acceptance by Americans of their responsibilities in the world order; and joining with other Christian movements in education and motivation of youth for the practice of democracy at home as between groups based on race, color, religion, or economic distinctions. All Associations are reorganizing their young adult programs emphasizing personal, educational and vocational counseling, special training classes and schools, social and recreational groups, dormitory facilities. Programs for children and adolescents in Y.M.C.A.-sponsored school and neighborhood groups are expanding. Student Associations are rebuilding their campus programs. Increased emphasis at all age levels is placed on co-ed activities and priority is given to public affairs and citizenship education.

Young Women's Christian Associations of the United States of America (Y.W.C.A.), established in 1906 to advance the physical, social, intellectual, moral and spiritual interests of young women. Membership: about 600,000. President: Mrs. Henry A. Ingraham. General Secretary: Mrs. Harrison S. Elliott. Headquarters: 600 Lexington Avenue, New York City. In 1945 the Y.W.C.A. in the United States served nearly 3,000,000 women and girls by providing through its 1,516 local centers, housing, food service, educational and recreational activities, and other services specially designed to help them meet changing conditions. In lieu of a national convention in 1945, local Y.W.C.A.'s held simultaneous meetings in the spring to consider the issues before the organization. Out of these meetings came program directives for the future. Special war projects carried by the Y.W.C.A. were continued in 1945. With the end of the war, the need for the services provided by the World Emergency and War Victims Fund of the Y.W.C.A. in the countries of Europe was greater rather than less. Relief and rehabilitation of homeless and displaced persons was carried on through this fund, and it also assisted in the reestablishing of Y.W.C.A.'s and in recruiting and training Christian leadership to carry on postwar work. In the United States, the closing of many USO clubs operated by the Y.W.C.A. during the war period, has made it necessary for the National Board of the Y.W.C.A. to expand its work and to organize new Y.W.C.A.'s to meet the needs of communities desiring a continuing service similar to that provided by the USO. As a member agency of American War-Community Services, the Y.W.C.A. was active also in helping women and girls meet the special problems affecting them in this reconversion period.

Youth Hostels, Inc., American, founded in 1934 to help all, especially young people, to greater knowledge, understanding, and love of the world by providing for them Youth Hostels (inexpensive overnight accommodations) in America and by assisting them in their travels both here and abroad over bike trails, foot paths, and highways. Membership over 115,000 to date. Honorary Presidents: Gifford Pinchot and Dr. Mary E. Woolley. President, Julien Cornell; National Directors, Isabel and Monroe Smith. Headquarters, Northfield, Massachusetts. In 1945, 225 hostels were chartered in 27 States.

Youth Problems, Committee on, appointed by the American Council on Education in 1942 to implement the findings of the American Youth Commission, and to form a rallying point for the many and worthy organizations carrying on youth programs, both governmental and non-governmental. Chairman: Henry I. Harriman. Secretary: Francis J. Brown. Headquarters: 744 Jackson Place, Washington, D. C. The original American Youth Commission was set up in 1935 by the American Council on Education with funds granted by the General Education Board, to study and evaluate factors relating to the care and education of American youth. With publication of its final report, *Youth and the Future*, in January, 1942, the work of the Commission was completed, and with its disappearance it was apparent that there was no one

group left in the field whose interest was not centered upon some one segment of the youth population of the nation. For this reason the Committee on Youth Problems was founded. Publications: *Color, Class, and Personality; Youth and the Future; Working with Rural Youth; Youth in the CCC; Barriers to Youth Employment*; and 20 other titles.

Zionist Organization of America, founded in 1897 to enlist public support for the reconstitution of Palestine as a Jewish Commonwealth and to foster a program of Jewish cultural renaissance. Membership: 160,000 exclusive of membership of affiliated and constituent organizations. President: Dr. Abba Hillel Silver. Executive Director: Dr. Sidney Marks. Headquarters: 1720 16th Street, N.W. Washington, 9, D.C. The destruction of European Jewish communities placed upon the American Zionist Organization the major responsibility for continuing the upbuilding of the Holyland. To this end the organization carries on a public relations and educational program designed to acquaint the American public with the achievements of the Jewish community of Palestine and with the historic claims of the Jewish people to its ancestral homeland. The 48th annual convention was held in Atlantic City, N.J., on November 16th-20th, 1945.

Zonta International, a classified service club of executive business and professional women, organized in Buffalo, N.Y., in 1919. There are 155 clubs in Canada, Denmark, Hawaii, Iceland, Sweden, and the United States with approximately 5,200 members. Main objectives are community service; encouragement of high ethical standards in business and the professions; improvement of the legal, political, economic, and professional status of women; and the advancement of international understanding, good will, and peace through a world fellowship of executive women. Zonta's chief service is work with women and girls and includes: youth centers; nursery schools; cooperation with juvenile authorities; health and social welfare programs; improved facilities for women and girls; encouragement to older business women; work with the blind; and scholarships and loan funds for students. The Amelia Earhart Scholarship, in honor of the U.S. aviatrix and Zontian, is awarded annually to a young woman qualified for graduate study in aeronautics. Zonta was one of the sponsoring organizations of the United Women's Conference at San Francisco, May, 1945. A valuable 1945 contribution to world peace was the international radio program entitled "Women United for Peace," which brought on the air outstanding women of four countries. Kerstin Hesselgren, first woman member of Sweden's Riksdag; Senator Thelma Moore Akana of Hawaii; Zonta's president, Jessie Ekman, of Canada; and Zonta's executive secretary, Harriet Richards, of the U.S. Headquarters: 59 E. Van Buren St., Chicago 5, Ill. Mrs. Lucile D. Edgar is editor of *The Zontian*, official publication.

SOIL CONSERVATION SERVICE. An agency of the U.S. Department of Agriculture, established in 1935. The Service promotes soil and water conservation, better soil utilization, and erosion control in agriculture, by supplying technical material and equipment to soil conservation districts organized under State laws and operated under local farmer direction. It also supervises the work programs of Civilian Public Service camps assigned to soil conservation activity. As of July 15, 1945, 1,355 soil conservation districts had been organized, including approximately 747,391,590 acres and roughly 3,454,069 farms. Under the guidance of the Service, drainage operations are performed on lands which thus can be made suitable for sustained production, and technical assistance is afforded to irrigation enterprises.

In cooperation with other agencies, the Service undertakes studies of the country's watersheds, preliminary to possible flood control operations on agricultural land. Agricultural lands which are submarginal or not primarily suitable for cultivation, are purchased by the Service and improved and managed to bring about needed land-use adjustments. Purchases aggregate over 11,200,000 acres. Of this, the Service manages 7,100,000 acres.

The Service undertakes water-resources studies to determine the feasibility of proposed flood-control, multiple-purpose, and agricultural water projects, and makes the data pertaining to them available to other agencies and enterprises for the correlation of water projects of mutual and public interest. Chief: Hugh H. Bennett.

SOLID FUELS ADMINISTRATION FOR WAR. An Agency established in the Department of the Interior by executive order on Apr. 19, 1943, which absorbed the preceding Office of Solid Fuels Coordinator for War. It centralizes government policies and activities pertaining to bituminous and anthracite coals and certain other solid fuels, utilizing the other agencies of the Department of the Interior in discharging its functions. The Administrator, who is the Secretary of the Interior, issues policy and operating directives to units of the solid fuels industries, recommends to the WPB any necessary program for wartime distribution or materials needed, and advises with the OPA on rationing and price adjustments, requests action from the War Manpower Commission when labor shortages threaten necessary wartime production, etc.

SOMALILAND. This lowland region lying east and south of the Abyssinian Plateau in the Horn of Africa is not a political unit, but is divided under French, British, Italian and Ethiopian sovereignty. Its area exceeds 375,000 square miles, with a population of more than 2,500,000. The region, despite its political fragmentation, has a geographic, ethnic and cultural unity. Its inhabitants are the Somali people who live a largely nomadic and pastoral life in a semi-desertic environment. Of Hamitic origin, they have a common language and are Moslems. There is no appreciable nationalist sentiment among them now, but their common background may give rise to one in the future.

French Somaliland. This is the smallest of the four parts of the region: 9,071 sq. mi. Its importance is due to its location near the southern end of the Red Sea, where it functions as a French counterpart to Aden. The capital, Jibuti, also serves as the maritime terminus of the railroad to Addis Ababa, through which is channeled much of the foreign trade of the Ethiopian highland. This transit trade was valued at 400,000,000 francs in 1943. In 1938 steam merchant vessels numbering 643 and displacing 2,823,096 tons stopped at Jibuti, nearly half of them being Italian and most of the remainder French. Otherwise the colony has little importance, salt being the only product of value (51,223 metric tons were exported in 1943). The census of 1944 disclosed a population of over 400,000, divided as follows: 14,056 Somali, 3,392 Arabs, 21,546 Danakil, and less than a thousand Europeans. Only the southern part of the colony thus falls within Somaliland properly so-called. It is administered by a Governor, with the assistance of an Administrative Council.

The British Somaliland Protectorate. This region has an area of 58,000 square miles and contains anywhere from one-half to three-quarters of a million Somali, largely nomadic. One of its principal economic functions has been to supply Aden with food supplies. Strategically it helps protect the short route to India. The Protectorate was overrun by Italian forces in August, 1940, but was won back during the Ethiopian campaign of the following year. Since then the War Office, rather than the Colonial Office, has been supervising the administration.

Livestock-raising is the main occupation. In 1936 the Protectorate had 2,500 sheep, 2,000,000 goats, 1,500,000 camels, 30,000 cattle. By treaty arrangements with Ethiopia, inhabitants of British Somaliland are allowed to pasture their stock in the Ogaden for a part of each year. Little agriculture is carried on. The principal exports are animal products, Somaliland being second in importance in the British Empire as an exporter of skins. Total

exports in 1941-2 amounted to £191,464, and imports to £635,743.

Before World War II Berbera was the capital; since then Hargeisa has become the seat of the military administration.

Italian Somaliland (Somalia). This is the largest, most populous and most promising (economically speaking) of the four Somalilands. It has approximately 1,200,000 inhabitants. After the Fascist conquest of Ethiopia it was enlarged and incorporated (June, 1936) into newly created Italian East Africa. Reduced to its original boundaries, Somalia has since 1941 been under British military administration, and few Italians now remain in the colony.

The Italians developed several plantations along the Webi Shebeli and other streams, raising bananas, cotton, sugar, kapok, etc. The natives engage largely in the usual Somali pursuit of stock-raising, with agriculture being important only in the southern and less desertic part of the colony. The Italians constructed a railway from Mogadishu (the capital) to the Villaggio Duca degli Abruzzi (70 miles), as well as several hundred miles of good highway, and an artificial harbor at the capital where the monsoons had hitherto interfered with port operations.

Ethiopian Somaliland. This is usually referred to as the Ogaden and was the disputed area over which the war with Italy broke out in 1935. It is the most backward of the Somali areas, with almost no towns or trade. Though nominally a part of the Ethiopian empire, it is now temporarily under British military administration. Its ultimate status has yet to be settled.

Events, 1945. The proposal that all of Somaliland be united under British rule was made several times during the year by East African publicists. However, Ethiopia and France both opposed any alienation of their territories. The former, in fact, put in a claim for Somalia at the time of the London Conference in September, when the Great Powers were scheduled to draw up a treaty with Italy. This question was still pending at the end of the year.

In British Somaliland the colonial authorities initiated various reforms. Among these was the establishment of a number of schools, including one for girls—the first ever to be opened in this old-fashioned Moslem country.

On Sept. 5 France and Ethiopia signed an agreement permitting the French company to resume management of the Jibuti-Addis Ababa Railway as provided in the 1908 concession. They also established a commission to fix the boundary between Ethiopia and French Somaliland.

During the year Ethiopian officials made various charges against the officers of the British military administration in the Ogaden and the "reserved areas" around Harar. Their accusations included illegal requisitions of property, closing off wells to the local population, and in general behaving as if the region were to remain a part of British territory.

ROBERT GALE WOOLBERT.

SOUTH AFRICA, Union of. A self-governing dominion of the British Commonwealth of Nations, composed of 4 provinces. Area, 472,550 square miles. Seat of the government, Pretoria; seat of the legislature, Cape Town. The territory of South-West Africa, administered by the Union of South Africa under mandate of the League of Nations, has an area of 317,725 square miles.

Government. Executive power is vested in the Governor General, appointed by the Crown on

recommendation of the South African Government, and in the Executive Council (Cabinet) which is responsible to Parliament. Parliament consists of a Senate of 44 members, 8 elected from each province, 8 nominated by the Governor General and four elected by the native population; and a House of Assembly of 153 members made up of 150 members elected from the provinces, roughly in proportion to the white population, for a five-year term unless dissolved; and three members elected by the natives who are listed on the Cape Native Voters' roll.

The standing of the parties in the Senate, based on the election of Nov., 1939, was as follows: United, 26; Reunited National, 13; Labor, 1; Representatives of the Natives 4 (1 vacant). In the House of Assembly (election of July 7, 1943) the standing of the parties was: United, 89; Reunited National, 43; Labor, 9; Dominion, 9; Representatives of the natives, 3; Independent, 1. Acting Governor General (Officer Administering the Government) since the death of Sir Patrick Duncan in 1943, Nicholas J. de Wet, to be succeeded on Jan. 1, 1946, by Major Gideon Brand van Zyl, appointed Oct. 28, 1945. Prime Minister, Field Marshal Jan C. Smuts.

Events, 1945. Prime Minister Smuts, who has a record of diligent participation in British Commonwealth conferences, was away from the country from Mar. 31 to July 16 on an extended tour connected with his attendance at the United Nations Conference at San Francisco. In the early months of the year the Prime Minister maintained his hold over the House of Assembly by outriding with a vote of 96 to 45 a censure motion of opposition leader D. F. Malan, directed against Smuts' announced policy of full employment. On Feb. 14 the Prime Minister again intervened with vigor in the Assembly, defending the decisions made at Yalta against Malan, who had attacked the Crimea Conference as a betrayal of the Atlantic Charter and pleaded for Germany as a bulwark in Europe against the threat of Bolshevism. Later, on Mar. 22, Malan urged that Smuts should press at San Francisco for an "Africa charter" closing the door to Asiatic immigration and ending Africa's exposure to Communist propaganda.

Smuts was the only prominent veteran of the Versailles Conference who played a conspicuous rôle at San Francisco. On May 1 he was unanimously given permission to speak to the plenary session out of alphabetical turn. He then made an eloquent address calling on the great powers to bear their responsibility for using their power to prevent war. He was one of the few speakers to pay a tribute to President Wilson's efforts to prevent war by means of world organization. Smuts consistently refused to fight the big-power veto, because of his belief that the big powers must carry the responsibility for maintaining order. His draft of the preamble to the Charter was the basis of the draft ultimately incorporated in that document.

Speaking in Ottawa on his way back from San Francisco, Smuts called the British Commonwealth "the first and greatest regional group in history" and the forerunner of similar groups which will eventually solve the vast problem of human government. He urged preparedness as a necessity for security. Prime Minister Smuts also paused in London on his way home as well as in Italy, where he visited South African troops. He was back in Pretoria on July 16. On Aug. 30 he had a rousing reception in Johannesburg, a city which in his long career had sometimes greeted him otherwise.

The United Nations Charter was ratified by South Africa by executive action on Oct. 9. According to an official declaration, the Government had intended to submit the Charter to Parliament in the usual way, but considerations of haste as well as of the Union's international prestige made it desirable to join as a foundation member. South Africa became the 40th member of the Provisional International Civil Aviation Organization when it signed the interim agreement in December. On Oct. 30 Smuts suggested that if the Council of Foreign Ministers continued to disagree an international peace conference should be convened.

Governmental Changes. The appointment of Major Gideon Brand van Zyl as Governor General, to take office on Jan. 1, 1946, was welcomed in South Africa. Major van Zyl is the first Governor General of the Union born in South Africa. After the death of the last Governor General, Sir Patrick Duncan, General Smuts assured Parliament, in response to nationalist representations, that the Government would recommend to the King that the office should be filled by a South African national able to speak Afrikaans.

Changes in the South African Cabinet announced on Nov. 9 included the creation of a separate portfolio of Health and Housing, to which Dr. Henry Gluckman, chairman of the National Health Services Commission, was assigned. Colin F. Steyn succeeded W. B. Madeley as Minister of Labor and H. G. Lawrence became Minister of Social Welfare and Justice.

These changes were necessitated by the withdrawal of the Labor Party from the Government in October. The other minority party which joined the Coalition Government after war broke out in Sept., 1939, the Dominion Party, withdrew in the latter part of November. Even without these two parties General Smuts retained a majority of 23 in the Assembly and a comfortable majority in the Senate.

Demobilization. The Union Government was taking steps in the problems of demobilization. A volunteer army of 345,000 men and women, of whom 223,000 were Europeans, had to be returned to civilian life as smoothly as possible, both for their own security and because the opposition parties, which contested participation in the war, were angling for the soldier vote. In 1944 the Government announced a plan for which it was prepared to spend over £100,000,000, roughly the amount of the defense vote for one year of war. Immediate benefits in 1945 included a war gratuity, a clothing allowance and free medical treatment. The guarantee of employment is the basis of the plan. For the estimated 40 per cent who have no employment to which to return there is maintenance on military strength with full pay and allowances until suitable work is found. South African casualties to May, 1945 were 37,422, of whom 6,417 were killed.

Racial Problems. South Africa, with nearly 7,000,000 natives in its total population of less than 11,000,000, and with a considerable Asiatic minority, continued to be harassed by racial problems. A quarrel of long standing with India proved impossible of adjustment in 1945. Some 250,000 Indians, largely settled in Durban and Natal, where they form the small trader and domestic servant class, have been the subject of a dispute with India since the passage of the Pegging Act of 1943. This act, passed by the Smuts Government, expressed the South African desire for racial segregation and added further to the onerous disabilities, legal and economic, of the Indians settled in Natal. An inter-Commonwealth agreement to limit the operation of the act was contravened by the Natal

Provincial Council's Residential Property Regulation Ordinance of June, 1944.

On Feb. 9 the Indian Central Assembly passed a vote of censure on the Government of India for its failure to recall its High Commissioner from South Africa. In an interim report published in Cape Town on June 11, the judicial commission investigating the Indian problem in Natal said that because of non-cooperation on the Indian side and the animosity on both sides there was little hope of friendly discussion and compromise. "In fact, any Indian leader who suggested such a thing would be committing political suicide," the commissioners observed. The commission took a serious view of the attitude of Indian politicians in India.

South Africa continues to need immigrants, according to a statement by Prime Minister Smuts at the annual congress of the Free State United Party on Dec. 3, but it is implicit in all such statements that only European immigration is desired. White supremacy is maintained only by the restriction of the franchise and a limitation on the entrance of natives to the towns provided for by the Urban Native Areas Act. On the other hand, education among the natives is progressing rapidly and efforts are made to eliminate the problems arising from illiteracy and social custom and prejudice. A Government White Paper published on Feb. 9 gave details of an expanded social security program to create productive employment for all and to improve the Union's health services, in so far as the measures could be implemented in co-operation with the provinces.

The People. The total estimated population on June 30, 1942, was 10,708,500, of which 20 per cent were Europeans and 80 per cent non-Europeans. Natives form 68 per cent of the population, whites 22 per cent, Cape-colored 7 per cent and Indians 3 per cent. Approximately 56 per cent of the Europeans speak Afrikaans, 39 per cent speak English, 3 per cent English and Afrikaans, and the remainder German and Yiddish.

For Europeans 3,622 state-conducted and state-aided public schools were available in 1941, and for non-Europeans 5,229. The five universities had an enrollment of 9,704 full-time and 2,007 part-time students in 1942. The religious affiliations of the European population at the time of the 1936 census were: Dutch churches, 55 per cent; Anglican, 19 per cent; Methodist, 8 per cent; with the remainder largely Roman Catholic, Jewish and Presbyterian.

The Economy. Gold mining, the most important industry of South Africa, normally accounts for more than 70 per cent of the value of all exports. Other minerals produced are iron, coal (in exportable surplus), diamonds, manganese, and a number of other valuable minerals. Manufacturing, including iron and steel products, made great progress during the war. Agriculture remains an important part of the economy, with cereals, citrus fruits, wine, tea, and tobacco as important products. The raising of cattle, sheep and goats occupies a considerable part of the population. Drought conditions which threaten to leave their effects for a number of years caused crop losses and cattle mortality in the Eastern Cape Province in 1945. Normally South Africa sends gold, diamonds, manganese, chrome, copper and wool to the United States.

ALZADA COMSTOCK.

SOUTH AMERICA. A continent comprising 10 republics (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela) and three colonies (British Guiana, French

Guiana, and Surinam). Total area, about 6,937,445 square miles (17,968,000 square kilometers). Estimated population, 88,680,000 on Jan. 1, 1940.

SPAIN. A state of southwestern Europe. Capital, Madrid.

Area and Population. Area, 196,607 square miles, including the Balearic and Canary Islands. The estimated population on July 1, 1943, was 26,491,166 (26,251,188 in 1940), including the Islands. Vital statistics in 1942 showed 527,046 births, 384,749 deaths, 188,040 marriages. On Jan. 1, 1942, the populations of the chief cities were estimated as: Madrid, 1,101,831; Barcelona, 1,087,099; Valencia, 459,460; Seville, 312,874; Zaragoza, 239,851; Málaga, 238,264; Murcia, 198,387; Bilbao, 195,890; Granada, 155,827; Córdoba, 144,042.

Defense. According to official reports, Spain has an active army of about 200,000 men and trained reserves of 1,300,000. The air force is supposed to be composed of 5,000 men and 5,000 reserves. Nevertheless, late in this year (1945), Franco made a statement that he had a million men under arms. The above figures do not include the Foreign Legion which, in the opinion of Republican circles, has absorbed over 40,000 German soldiers who took refuge in Spain after the liberation of France. The army's equipment is inadequate and obsolete as the Government was unable to replace it during the war. There is a law requiring two years military service. The navy has 3 cruisers, 20 destroyers, 4 sloops, and a number of auxiliary vessels.

Education and Religion. According to official statistics, between 40 and 45 per cent of the adult population is illiterate. Primary education is free and compulsory although the law is not enforced in this respect. The government claims that about 45,000 public elementary schools function with a total of 2,000,000 pupils in attendance. There are over 100 schools for secondary education and 12 universities besides 58 normal schools for the training of elementary school teachers.

Catholicism is the religion of Spain and at the end of the Civil War, the Roman Catholic Church was reestablished as the state religion. The religious orders recovered their legal status, lost during the Republican era, including control and jurisdiction over cemeteries, teaching rights, and other privileges.

Production. Agriculture is Spain's principal economic activity. Mining, manufacturing and fishing rank next in importance. Estimated yields of her chief crops in 1944 were (in metric tons): wheat, 3,000,000 (a 20% increase over the 1943 output); barley, 1,500,000; oats, 560,000; rye, 490,000 (an increase of 20% over 1943); corn, 600,000; rice, more than 200,000; potatoes, 3,500,000; chickpeas, unofficially reported at 110,000; beans, 98,000. The production of the 1943-44 orange crop was estimated at 661,380 short tons (500,000 metric tons in 1942-43); olive oil, 240,000 tons in 1944 (465,000 in 1943); almonds, slightly over 12,000 tons; filberts, 25,000 tons; sugar, approximately 140,000 tons; and cotton, 4,200. The wine output was estimated at 422,000,000 gallons which is about 75% of the normal yield. A fair year was reported in the livestock and dairy industries, although no figures are available.

Chief among the forest products in 1944 were: cork, 62,000 tons, and turpentine and rosin, 41,000 tons.

Mineral and metallurgical output (in metric tons): coal, 11,600,000 (10,800,000 in 1943);

lignite, 1,200,000; pig-iron, 470,800 in the first ten months of 1944; steel, 548,600 in the first ten months of 1944; iron ore, 1,115,565 in the first eight months of 1944 in continental Spain; zinc ore, 43,261 (71,091 in 1943); copper ore, 218,000 in the first eight months of 1944; copper metal, 6,119 in the first eight months of 1944; manganese ore, 22,785 in the first eight months of 1944 (compared to 24,027 for the entire year, 1943); tin ore, 518 in the first eight months of 1944 (compared to a total output of 464 during all of 1943); lead metal, 32,000 (40,000 in 1943); fluorspar, 55,000 (36,000 in 1943); mercury ore, 35,000 flasks of 35 kilograms each; tungsten ore, approximately 2,450 in the first eight months of 1944 (compared to a year's total of 3,600 in 1943); and potash, 131,000 (90% increase over 1943).

The chief manufactures were cotton textiles, paper and cement (1,111,000 tons in the first nine months of 1944 as compared with 1,122,000 during the corresponding period in 1943). The production of paper and cardboard in 1943 was approximately 116,000 tons, while the output of glass, formerly one of the chief manufactures, was reduced to an insignificant figure.

Foreign Trade. The latest available statistics on Spain's foreign trade cover only the first half of 1944. According to these official figures (in gold pesetas), total exports for this period were 1,641,278,864 (1,474,423,160 during the first half of 1943); imports, 1,367,993,229 (1,283,524,672 for the corresponding period in 1943). The chief imports were foodstuffs, manufactured goods and raw materials, with chemicals, principally fertilizers, taking a leading role during the second quarter of 1945. Exports included foodstuffs, raw materials and manufactured goods.

Finance. The amount of foreign exchange which the Spanish Foreign Exchange Institute had accumulated by the end of June, 1944, reached \$45,000,000 in dollar balances, while sterling balances amounted to £5,200,000 in gold and silver exchange. The volume of currency in circulation at the end of Nov., 1944, was 16,928,000,000 pesetas, compared with 16,361,000,000 pesetas at the end of 1943. Government expenditures for 1944 were estimated at 13,294,690,131 pesetas and receipts at 10,330,288,516 pesetas. A public loan was floated at 3% in Feb., 1944. Army, navy, and air force expenditures absorbed 26.6% of the ordinary budget appropriations in 1944. The budget for 1945, the exact amount of which was not stipulated, is lower than that provided for 1944. However, significantly, there was, for the first time since the formation of the Falange Party, no mention in it of any appropriations for that organ, other than the designation of 32,318,000 pesetas to the "Secretary General of the Movement." The public debt at 1,535,652,000 pesetas is an increase of about 336,000,000 pesetas over last year, while the allotment to the Special Tribunal for the Repression of Communism and Freemasonry remains the same at 400,000 pesetas.

In December, the National City Bank of New York, acting as agent for the Spanish Government, notified the International Telephone and Telegraph Corporation that it had received \$2,000,000 for the amortization of the corporation's holdings of \$50,000,000 of Spain's sixteen-year, 4 per cent, United States dollar bonds.

Transportation. In Nov., 1945, the national railway system included about 12,855 kilometers of broad-gauge track, while the narrow-gauge railways included about 75 small private company lines with an aggregate length of approximately 3,500

kilometers. Carloadings in the first eleven months of 1944 were reportedly totaled at 2,769,000 tons compared to 2,875,600 in 1943. Despite the continued shortage of equipment, the railroads carried an amount of traffic during the second quarter of 1945 which was approximately equal to that carried during the corresponding period of the preceding year. The Spanish merchant fleet carried about 9,200,000 tons in 1944. The total registered tonnage of the fleet was estimated at 1,000,000 tons in 1944, while on Jan. 1, 1943, the fleet aggregated 1,019,884 gross tons.

Government. As a result of the civil and semi-international war that ended in 1939, the Republican Government established in 1931 was replaced by a dictatorship headed by Generalissimo Francisco Franco y Bahamonde as Caudillo (Leader) of the Empire, Chief of State, Commander in Chief of the Armed Forces and Head of the Falange Española (Government Party). The political groups backing the Government included, beside the Falange (Fascist), the Carlists, the Clericals, and the Monarchists, as well as some independent groups of the landed aristocracy and moneyed élites. All other political parties were outlawed. Until this year, General Franco exercised his dictatorial power either directly, or through his Cabinet, or through the governing organs of the Falange (see YEAR BOOK, 1944, p. 587). This year, however, some changes were introduced into the government, such as the creation of the "Consejo del Reino" (Council of the Realm) to function as an advisory board to the Head of the Government. Also, Franco gave signs of trying to appear before the world with the superficial exterior of a democracy by convening the Cortes or Parliament. Naturally the Cortes was composed of deputies not freely elected by the people (see below, Events). The Falange Española, in another grand gesture to win Allied friendship, was dissolved.

Events, 1945. To analyze the principal events of Spain in 1945, it is necessary to take into consideration not only the occurrences within the peninsula and the activities of the group in power, but also the efforts of the other two political groups endeavoring to overthrow the dictatorship of Caudillo Francisco Franco. These are the Monarchists, grouped around Prince Juan de Borbón, and the Republicans in Exile, who represent the legitimate government displaced in 1939 by Franco's insurrection, which was aided by the Fascist forces of Hitler and Mussolini.

Franco's Spain. At the beginning of the year, Franco's main problems were the Allied victories and the inevitableness, already evident, of Hitler's defeat. The liberation of France occasioned encounters with the Spanish refugees who had crossed the border in 1938 and joined the French underground resistance forces (see Year Book, 1944, p. 588). Later the reverse of this situation was repeated. Those who crossed the border into Spain were the Vichyite collaborationists, and their friendly reception by Blue Spain provoked France's indignation.

The Caudillo's political party began to show signs of disintegration. The Falange started a political flirtation with the Monarchist groups. Franco, disturbed about the outcome of the war, offered himself to England as a mediator for peace, but the arrogant Caudillo, who had in 1939 announced the reconquest of Gibraltar as a plank in his political platform, was snubbed by the British Lion.

This first effort to "appease" the Allies having

failed, Franco tried his hand with the United States. His Minister, Lequerica, hastened to aver that "Spain considered herself a spiritual belligerent against Japan." This statement was attacked by the liberal press in the U. S. and provoked, among others, Representative John M. Coffey's accusation that Franco's consul in the Philippines was an open collaborator with Japan. This appeasement feeler failed in the face of the Falange's unsavory activities and the help given by Franco, according to U. S. Military Officials, to German troops still resisting all along the French coast.

Life within the peninsula continued as it had in the latter part of 1944. The minority group composed of aristocrats, landowners, merchants, and the military class reaped the benefits of a war economy and normal business with England, the U. S. and Latin America, while the masses on the other hand, suffered the effects of inflation. Unrest was expressed by a series of attacks on the Falange. In the latter part of February the District Leader of Cuatro Caminos (Madrid) was shot to death, together with another member of the institution. The assailants were not found, but 16 persons accused of being "reds" were executed. The burial of the Falangists gave the party an opportunity to make a display of force accompanied by the frantic attacks against Jews, Marxists, Liberals, and Freemasons characteristic of Fascist propaganda.

Important positions in the Army remained in the hands of the Falange. Appointed to the post of Captain General of Madrid was General Agustín Muñoz, wanted by the Soviet Union as a war criminal for his atrocities against civilians when he led the famous Blue Division sent by Franco in support of Hitler's invading armies.

In an attempt to receive an invitation to the San Francisco Conference, Franco started another "appeasement offensive" late in March, Lequerica pronouncing more "timely" statements about the "Christian ideals common to the U. S. and Spain."

Ambassador Norman Armour upon his arrival in Madrid, was showered with praise by the Falangist press, which stressed the fact that as the husband of a Russian princess, he must naturally be opposed to the Soviet Union.

At the same time, Franco took the first step in his attempt to find a way of severing relations with Japan. He accused this nation of abusing the Spanish population in the Philippines, and tried to get his colleague, the dictator of Portugal, to do likewise. The latter refused the invitation since Portugal had already protested against the Japanese occupation of its possessions (see Year Book, 1944, p. 489).

In Madrid, bombs placed in the offices of the newspaper *Información* and in that of the Under Secretary of Education, manifested the growing dissatisfaction of the Spanish people with the Franco regime. As a counter-measure, a Parade of Victory to commemorate Franco's triumph was organized in April. The celebration met with a cold reception. Notably absent were the U. S. Ambassador and General Francisco de Borbón, an important member of the Monarchist group. Falangists of Ceuta (North Africa) were accused by the U. S. of planning the assassination of President Roosevelt enroute from the Yalta Conference. There were insistent rumors of Franco's approaching fall and the formation of a government by the C.E.D.A. (Spanish Rightist group). Death by the garrot was the fate of one of the eight "reds" executed as a further reprisal for the Cuatro Caminos incident.

In his "fight for San Francisco," the Caudillo decided to lift his censorship on the activities of the foreign press. The result proved unfortunate for the Caudillo's sense of security. Associated Press correspondents issued a release declaring that, after travelling throughout Spain, they could state without reservations that the majority of the people were in favor of the Republic. Franco began to disagree with the Falange. The Army became more and more favorably disposed to the Monarchy. The refugees sought by the Allies continued to arrive. Laval and the Belgian Fascist Degrelle went to Spain.

The Cortes met on May 14 and approved a "Bill of Rights," intended as another "democratic" play for Allied sympathy, but the effort proved futile. At the request of the delegate from Mexico, the world dignitaries assembled at San Francisco formally condemned the Franco regime.

A significant event occurred during the month of June. Norman Armour, U. S. Ambassador, demanded that the German Embassy in Madrid be sealed and turned over to the Allies. Franco's reply was to lock the doors and give the keys for "safe-keeping" into the hands of the Falange-controlled Safety Brigade. When the Allied diplomats arrived on the scene, all important documents had disappeared, especially those referring to the work of the Gestapo in Spain.

The internal situation grew more tense toward the middle of June and there were rumors of guerrilla uprisings, particularly in Andalucía, Galicia, Asturias, and Santander. Later, in connection with the international scene, Lequerica attempted to explain the United Nations' censure of the Franco Government at San Francisco by attributing it to the influence of "foreign Freemasons." In July, the Laval case further strained Spain's relations with France. Franco continued his devious policy and once more tried to appease the democracies by announcing the creation of the "Consejo del Reino" (Council of the Realm), a political institution of medieval character.

Another crisis shook the foundations of the Cabinet shortly after. Lequerica resigned and was replaced as Minister of Foreign Affairs by Alberto Martín Artajo, a secondary figure whose political experience had been limited to his relations with the Vatican. Of the 12 new ministers, only four did not belong to the Falange. There was one innovation however: the three military ministers were not appointed by Franco but by their respective units.

On July 24th the Falange held its political meeting, but the press did not publish Franco's speech. Extra-officially it was known that the meeting had dealt with the "official" dissolution of the Party and plans for government institutions to absorb its various organs.

Franco continued his "divide and rule" policy. In a move to weaken the position of the Monarchists, he began to "build up" titled Carlos VIII, grandson of Carlos VII and an aspirant to the throne. By this procedure he hoped to reawaken the "Carlist" movement which, during the 19th century, had caused so much civil strife in Spain. Carlos went to reside at Andorra at government expense.

The Caudillo took a summer vacation in August, meanwhile meditating over the domestic and international situations. The Monarchists refused to participate in the Consejo de Regencia. The well-known philosopher José Ortega y Gasset (one of the founders of the Republic, but not now connected with its followers) arrived in Spain, and

it was rumored that he had been called upon to form a transition government.

Bevin's statements with regard to non-intervention in Spain's domestic matters raised the Caudillo's spirits. So cheerful was he that he praised the British Labor Party, promised elections in Spain, and went so far as to predict that "this will be the century of Socialism." His happiness was short-lived for, on August 23, President Truman declared, "We don't like Franco and his Government," a statement which the U. S. Embassy in Madrid was quick to release.

Franco's troubles continued. Russia insisted upon its international claim for damages caused by the Blue Division. Belgium demanded the extradition and return of Degrelle. The War Crimes Commission requested the extradition of the German officers who had found refuge in Spain.

Franco tried to gain time and thought that by suppressing the Fascist salute he could placate the Allies. An interesting note was that the Falangist press did not comment on the fact. The official announcement was merely inserted in the Gazette, official Government organ, in the following manner: "Decree number 263 of April 24, 1937, is revoked." Not daring to attack the democracies directly, the Caudillo released his pent-up emotions by attacking the Freemasons, whom he accused of controlling the governments of the U. S., England and France.

At the end of September, governmental circles were commenting on the "evolution," the term descriptive of the arrangement by which Franco was to retire from the government and the Monarchy was to appear upon the scene.

Franco tried to win over De Gaulle, who needed Spanish goods to feed the French people. The diplomatic relations between the two countries were singular. Spain had an Ambassador in Paris who could not function as such because the French Government would not accept his credentials. De Gaulle had a representative in Madrid who was not considered a diplomat, and with whom the necessary arrangements were made for the shipment of the required goods to France. Franco discreetly mentioned the idea of the "evolution" at a military meeting held in Vitoria (September 19). In his speech he claimed that he had to leave the government because he needed a rest, but that he would do so when and how he desired, although it would be soon.

Toward the end of the month the Government of Bolivia severed diplomatic relations with Blue Spain in a note which stated that Franco's Government was "contrary to the democratic principles of the United Nations." Spanish Minister of Foreign Affairs Artajo hastened to issue a statement regretting the incident, which he blamed on the "vehemence of the leftist groups," and expressing his hope that "reason and justice would show the Bolivian Government the mistake they had made."

In the U. S., the American Committee for Spanish Freedom made known the fact that it had requested the State Department to intercede for the liberation of Spanish underground leaders who were still political prisoners. While in France, the President of the Latin American Confederation of Workers, Vicente Lombardo Toledano, requested the delegations of the International Labor Conference to petition their respective governments for the severing of diplomatic and commercial relations with Spain and for the recognition of the Republican Government headed by Gual.

Another hammer blow to the foundations of the Franco regime was dealt by Spain's exclusion from

the Allied Conference on Tangier. The American State Department, as well as Downing Street, accepted the Russian viewpoint as expressed in the following statement, and signed an agreement to that effect. "In signing this final act, the Soviet delegation adheres to the view which it expressed previously to the effect that, although the Spanish people are incontestably interested in the administration of the international zone of Tangier and although Spain must finally be called to participate in the appropriate international organisms, this participation of Spain in the administrative organisms of the zone of Tangier cannot be allowed until General Franco's regime in Spain, which was established with the support of the Axis Powers and which in no measure represents the Spanish people, shall be replaced by a democratic regime."

In Spain the "evolution" idea continued to take shape. The Caudillo met with a group of army men in Toledo and in an address shrouded in secrecy, pointed out that there were three roads for Spain to follow, two of which he counted upon one million soldiers to oppose by force. They were, according to him, the great effort being made by his opponents to implant their ideas forcibly from foreign countries, and secondly, the possibility of another Civil War. Against both contingencies "his army" stood, an impenetrable barrier! The third and only acceptable one to him, was that the opposition should be willing to deal amicably with him. "We are ready to accept any proposition not unworthy of our Catholic ideas and anti-Communist principles," he was quoted as saying.

In November, the leader of the Spanish guerrillas and former member of the F.F.I. accused Franco, from London, of having enlisted 40,000 German soldiers into his Foreign Legion after the liberation of France. The insecure Caudillo found solace, however, in a radio broadcast originating from the Vatican in which the Pope called the faithful of Spain to defend the Church, and praised them for their defense of Catholicism during the Spanish Civil War. He closed by extending the Papal Benediction to Generalissimo Franco.

However, the blessing did not prove as fruitful as was desired. Two days later the White House announced that Ambassador Norman Armour, for personal reasons, would be retired at his own request from the foreign service and that he would shortly be returning to the U. S. In Washington diplomatic circles, this was interpreted to mean that the post would not be filled until a change of government should take place in Spain. The incident was extremely important, considering the fact that Franco had based his hopes for improved relations with the U. S. on Armour's anti-Soviet attitude.

Hastily donning a democratic guise, the Caudillo granted a Bill of Rights to the Spanish people. The traditional rights of man are apparently present in the document, but each "right" is tied to a legal technicality, and each liberty offset by a duty. Furthermore, the six most important rights may be suspended at the will of the Government. The press announced that the very day on which the decree was published, Madrid was swamped with monarchic pamphlets, and there immediately followed numerous arrests of "violators" of the new law.

What Franco's "liberties" mean may be seen by examining the condition of the Spanish press. Despite Franco's reestablishment of freedom of the press, the majority of the papers remain under

the management of the Falange or of organizations favored by the regime, their rightful owners having been deprived of their property. In early December, this was the situation. *El Liberal* and *El Heraldo* were still closed down, and *Madrid*, a governmental afternoon paper was being printed on their presses. *Ahora*, *El Popular* and *Estampa* were in the hands of Manuel Aznar, Franco's Ex-Ambassador to the U. S., who was publishing in their stead a weekly picture magazine, *La Semana*. *Arriba*, the official Falange organ is now published in a modern plant formerly belonging to the powerful newspapers, *El Sol* and *La Voz*. The evening paper *Información*, during the war vigorously pro-Axis, is published on the presses of the former *Libertad* and *Informaciones*. Although it is expected that some of the former owners will try to regain control of their presses, true freedom could hardly exist, because all papers must obtain their newsprint through the Falange syndicate and no one is allowed to work on a paper without a Falange permit.

After his farcical concession of "liberties," Franco reestablished the Somatén, the police corps which, during the Monarchy, worked in the service of employers against their workers and was responsible for the murder in Barcelona of union members and political leaders in the years 1917-1923. By means of this step, Franco proposes to have at his disposal another militarized agent of repression designed to make room for the Falangists and ex-combatants of the Blue Division.

Republican Spain. When Franco's regime triumphed in Spain, the Prime Minister, Dr. Juan Negrín, established his residence in London, while most of the members of the Cortes, with its President, Diego Martínez Barrios, accepted the hospitality of the Mexican government, the only American state that has never recognized the Franco Government.

It was natural, as a result of the favorable political climate and freedom which the refugees enjoyed, that the Republican Government's activities should largely take place in Mexico. During the Chapultepec Conference, Barrios requested all the American nations through Ezequiel Padilla, Mexican Minister of State, to sever diplomatic relations with the Caudillo. At that time, six Allied nations (Mexico, the Soviet Union, Czechoslovakia, France, Yugoslavia and New Zealand) had no diplomatic relations with Blue Spain. However, in spite of the efforts of the liberal elements present at the conference, it was decided to leave the question of Spain untouched since it was an "extracontinental affair." This idea of "non-intervention" in Spain seemed to prevail among the majority of the United Nations countries comprising the bloc controlled by the U. S. and Great Britain. Nevertheless, the San Francisco Conference's decision, suggested by the Mexican delegate, to exclude Franco Spain from the United Nations Organization (see above, **FRANCO'S SPAIN**), inspired the Republicans in Exile to reorganize their government.

Dr. Negrín came to the U. S. in the latter part of May. Julio Álvarez del Vayo (Ex-Minister of State) had a long conference with Molotov in San Francisco. The "Junta Suprema de Unión Nacional," underground organization, and the Communists offered to help the former Prime Minister reorganize the legitimate government.

Early in June Negrín arrived in Mexico, faced first and foremost by the task of selecting a new President of the Republic to fill the vacancy left by the resignation and subsequent death of Manuel

Azaña. The Cortes, required by the Constitution to convene on Spanish territory, considered the feasibility of meeting on a ship flying the Spanish flag.

Finally on August 17, the 96 members residing in Mexico met in the Palacio de la Diputación, whose Chamber of the Cabildos had been temporarily declared Spanish territory by a special authorization of the Mexican Government. In accordance with the Republican Constitution of 1931, and with the intention of bringing about the crisis which would make the reorganization possible, Dr. Negrín tendered his resignation as Prime Minister, and the Cortes appointed Martínez Barrios provisional President of the Republic. The President immediately empowered José Guiral Pereira to form a new government. Guiral failed to form a government representative of all parties as he had hoped. His government was formed of the majority groups, the most important being the Republican Leftists, the Republican Action and the Socialist Party. He also enlisted the cooperation of noted statesmen not connected with the Cortes, among whom were Ex-Minister Angel Ossorio, the well-known jurist, Luis Jiménez de Asua, and the Ex-President of the Tribunal of Constitutional Guarantees, Alvaro de Albornoz. Other distinguished figures of Spanish public life and letters formed a part of the new Cabinet. For example, Fernando de los Rios, Ex-Ambassador and professor, became Minister of State and Augusto Barcia assumed the post of Head of the Treasury Department.

The cabinet members belonged to the different parties in the following proportion: four ministers belonged to the Republican Left; two were Socialists; one belonged to the Unión Republicana; one was a Basque Nationalist; one belonged to the Esquerrá Republicana; one to the Catholic Action; and one was unaffiliated. Dr. Negrín offered his help and cooperation, but he and the other members of his following refused to accept any position in the new government, saying: "As Republicans, whether the government pleases us or not, we are pleased that a government has resulted from the present crisis. We must not attack it nor make its existence more difficult." Besides the Negrín faction of the Socialist Party, other groups excluded from the reorganized government were: the Unión General de Trabajadores, strongest trade union in Spain; a section of the Leftist Republicans, the Federal Party, the Asturian Workers Alliance and some minor groups.

The Republics of Guatemala, Panama, and Bolivia granted recognition to the Republican Government and Venezuela followed suit in November, barely two months later.

Anxious to sound out Washington, Fernando de los Rios, Minister of State, came to the U. S., and there made public statements to the effect that the Allied Nations should give Franco a specified date by which he should have liberated political prisoners, reestablished citizen's rights and set the date for elections.

The Cortes continued to convene in Mexico and agreed to remain there until after Franco's collapse, when it plans the following procedure. Within three months of the Republican Government's return to Spain, it will take a census and draw up democratic voting lists; call for the election of Deputies; reestablish the Tribunal of Constitutional Guarantees and designate a President of the Republic to succeed Barrios. Prime Minister Guiral called for Republican action on a wide front and especially every possible aid to the underground movement within the peninsula. Re-

ferring to the religious question, Guiral urged that freedom of belief be maintained and that the Republican Government attempt to reach an understanding with the Church whereby the latter's jurisdiction would be clearly defined. He stressed that the Government will insist upon the necessity for removing both the Church and the Army from factional politics.

The Prime Minister's speech elicited an overwhelming vote of confidence from the Cortes, in which only Negrín's Party and a few minor groups refrained from participating. The Galician group and the Esquerrá Catalana, although voting confidence, reproached Guiral for not giving other minority groups a share in the government.

Monarchist Spain. Early in the Franco dictatorship, the Spanish Monarchist Party supported the Caudillo because he had ousted the hated liberals, responsible for the downfall of Alfonso XIII. Later however, the Monarchists realized that Franco and the Falange intended to retain power solely for themselves; they opened a campaign to reinstate the monarchy as a compromise between the dictatorship and the Republic.

The general lines of this campaign have not changed during 1945. In January, the aspirant to the throne, Juan de Borbón, spoke of going from Switzerland to London, but the British Government, through its Ambassador in Berne, notified Juan of its disapproval and the Prince deferred his projected journey. Later in the same month, Franco's Ambassador to England, a rabid Monarchist, was reported to be trying to ascertain whether or not Russia would be interested in the monarchist "solution." Apparently he met with a cold reception by the Soviet Union and the subject was dropped.

Paris witnessed a display of Monarchist propaganda in March. In the Spanish Church on the Rue de la Pompe a high mass was offered to commemorate the death of Alfonso XIII. Don Juan was present, but the Queen Dowager was not. Curiously enough, the ceremony was organized by Manuel Mateu, Franco's new Ambassador to France, known to be a Nazi sympathizer. According to the French press, the affair met with a lukewarm reception and was, apparently, a disappointment to Juan, who had expected an enthusiastic demonstration from the French Monarchists. In a manifesto published that same month to coincide with the anniversary of the end of the Spanish Civil War, Juan demanded the throne and promised the restoration of Constitutional liberties. This document, openly anti-Franco, indicated the Monarchists sensed the Caudillo's increasingly weak position in the face of Allied victories.

Meanwhile in Spain, the Monarchists were becoming more and more estranged from the dictatorship. Antonio Goicochea, who had been considered, together with the Duke of Alba and the Duke of Borbón, as one of the three mainstays of the throne, resigned as Director of the Bank of Spain. There appeared to be a growing trend among Juan's followers to speak openly of the Restoration.

Juan and Franco exchanged emissaries in September. The Caudillo notified the Prince that he planned to establish the Council of the Realm (see above, *France's Spain*), but evidently no agreement was reached, because Juan refused to deal further with the emissary.

A split in the Monarchist ranks appeared around this time. Jaime de Borbón, Juan's older brother who cannot aspire to the throne because he is a deaf mute, declared his intention of working for the accession of one of his sons to the throne. With

his family, he left for Italy to further his project. A bright spot appeared on the Monarchist horizon toward the year's end however, when Franco made his statement about the possibility of retirement (see above, *FRANCO'S SPAIN*). Nevertheless, Russia's insistence that Franco be judged as a war criminal disturbed them, as this could very well retard negotiations.

In world diplomatic circles the opinion prevailed that Juan would hesitate to reenter Spain without the approval of England and the U. S., and that he was unwilling to come to any agreement with Franco which might connect him in any way with the Caudillo's Government. It appears that Franco may have suggested to the Bourbon aspirant that in return for the throne, he be appointed Chief of the Army. Such an arrangement would naturally be awkward for the new Government, since Franco's name would still be on the Russian list of wanted war criminals. Nor would a government composed in this fashion readily obtain the recognition of the other major powers. Although it is reported that Franco's proposal had been approved by Vatican circles in Rome, the Russian demand has paralyzed all action, since Juan insists upon Anglo-American guarantees of approval.

The year ended with Don Juan again planning a trip to England, as indicated by the arrival in London of one of his emissaries.

Meanwhile, within the Monarchist circle in Spain a new group is taking shape, the Catholic Party of the Left, which follows along the same lines as the French Mouvement Republicain Populaire. The director of the movement is a priest, advisor to Franco's Minister of Foreign Affairs.

A dispatch from Washington dated December 16, intimated that, according to informed diplomatic circles, a break with Franco would soon be forthcoming. Such speculation coincides with a French Foreign Office announcement that the U. S. and Great Britain have been asked to consult with France concerning a rupture with Spain at a time when Ambassador Norman Armour, en route to retirement in the U. S., is in Paris.

Spanish Possessions. The area and population of the colonial possessions of Spain are approximately as shown in the accompanying table. Considered an integral part of Spain for administrative reasons are the Canary Islands off the northwest coast of Africa, Melilla and Ceuta in North Africa and the Balearic Islands in the Mediterranean.

SPANISH POSSESSIONS

<i>Colonial Possessions (Capital)</i>	<i>Area in Sq. Ms.</i>	<i>Population</i>
Possessions in Africa:		
Rio de Oro and Adrar (Villa Cisneros).	109,206	840
Ifni	965	20,000
Spanish Guinea (Santa Isabel)	10,036	167,000
Fernando Po, Annobon, Corisco, Great Elobey, Little Elobey	795	23,846
Spanish Morocco (Tetuan)	7,700	750,000
Total, Africa	128,696	934,686

Río de Oro and Adrar are divided politically into three zones: the colony, the Protectorate, and the occupied territory. Agriculture is practically non-existent in this colony, fishing being the principal economic activity. Ifni, ceded to Spain by Morocco in 1860, was only nominally occupied by that country until April 6, 1934, when it saw the Spanish flag raised on its shores for the first time. Contained within its small area are several harbors and villages, the inhabitants of which are engaged in fishing and in cultivating dates and garden produce.

The Spanish territory on the Gulf of Guinea is divided, according to a decree of April 16, 1935, into two districts: Fernando Pó and Continental Guinea. The first includes the island of Fernando Pó; the second, the continental zone of Río Muni, together with the archipelago of islands from Great Elobey to Little Elobey, and Corisco and Annobon. The territory as a whole is under a governor-general assisted by a sub-governor and a secretary-general, while each of the territories into which the colony is divided is under the control of a territorial administrator.

Fernando Pó's main product is cocoa which constitutes its chief export. Continental Guinea contains vast forests and luxuriant vegetation, but its lack of harbors and its inaccessible rivers have prevented the development of more than a few Spanish, French, and English factories, so the exploitation of its resources has been impeded.

MIGUEL JORRIN.

SPANISH AFRICA. The territorial possessions of Spain in Africa have in toto an area of 134,716 square miles and a population in excess of a million and a half. These territories are divided as follows:

Morocco. Along the northern shore of Morocco are five places of Spanish sovereignty, or "presidios," including Ceuta (the southern counterpart of Gibraltar) and Melilla. They have an area of 82 square miles and 145,000 inhabitants. Along the western coast of Morocco, south of Casablanca, lies the enclave of Ifni (741 square miles and 35,000 inhabitants) also under direct Spanish sovereignty. However, the most important of Spain's possessions is her Protectorate in the Northern Zone of Morocco, of which the area is 7,592 square miles and the population approximately one million. There is also a Protectorate of the Southern Zone which is larger but much less populous (area 10,039 square miles, population 12,000).

The Sultan of Morocco is nominally the sovereign within the two Spanish Zones, where he is represented by a Khalifa. In reality the administration is carried on by the Spanish High Commissioner, who is responsible to the Madrid Government and who resides at Tetuan. With the exception of some 50,000 Europeans and 13,000 Jews, the population of the Spanish Zones is Moslem and largely Arabic-speaking. The inhabitants of the Rif Mountains in the Northern Zone are very warlike and formerly gave the Spanish much trouble. General Franco used many of them during the Spanish Civil War (1936-39) as shock troops. Few educational opportunities are available for the native population.

The natives depend upon a rudimentary agriculture, grazing, and other primitive occupations. Important quantities of iron ore are mined in the Northern Zone. The Southern Zone and the Ifni territory lie virtually outside of the world economy.

Spanish Sahara. This almost wholly desert region has an area of 105,409 square miles and less than 50,000 inhabitants. Administratively this colony is under the jurisdiction of the High Commissioner of Morocco.

Spanish Guinea. This colony consists of several parts, both island and mainland, with an area of 10,040 square miles and a population of 138,797 (of which only about 1,000 are Europeans). Included in this administrative unit, which is administered by a Governor who resides at Santa Isabel, are the islands of Fernando Po, Annobon, Corisco and the two Elobeyes. The continental part of the colony is by far the largest in area but is relatively undeveloped. Cocoa, coffee and lumber are the colony's principal exports.

Not included in Spanish Africa are the Canary Islands, which administratively are a part of the metropolitan country.

Events, 1945. The victory of the United Nations inevitably caused the authorities in the Spanish Zones of Morocco to review their relations with France. During the period when the latter had been a defeated and occupied country, the Khalifa had pursued a quite independent policy towards his sovereign, the Sultan of Morocco. The withdrawal of Spanish troops from Tangier also had repercussions on Spanish prestige throughout northwest Africa (see TANGIER).

The recruitment of Nigerian laborers for the plantations of Fernando Po—a practice of long standing—was strongly criticized by Nigerian publicists, who felt that the British Government should insist on greater safeguards to protect Nigerian workingmen from exploitation, particularly in view of the authoritarian character of the Spanish régime.

ROBERT GALE WOOLBERT.

SPANISH LITERATURE. Since it is still true that only first class mail can be sent from continental Europe, it is not yet possible to buy books from Spain. The receipt of journals and periodicals is also still interrupted, hence it is extremely difficult to obtain information about what is being published in Spain at the present time. Only the first seven numbers of the *Bibliografía Hispanica* have reached this country as this article goes to press. For all of these reasons, the information upon which this article is based must be regarded as incomplete.

In recent years most of the news from Spain has been so tragic or so disappointing to those who admire Spanish genius and the Spanish spirit, that it is heartening to read any news whatsoever of the publishing of books, and to realize that in spite of the long interruption of civil war and of chaos in Europe, Spanish literature is alive and productive.

One indication of this liveliness is the celebration on April 23 of the Fiesta del Libro, organized by the Instituto Nacional del Libro Español, in collaboration with the Sindicato Nacional del Papel, Prensa y Artes Gráficas. On this occasion all book-sellers gave a ten percent discount on sales. Special celebrations were held in the University, El Instituto de España, the Real Academia de Medicina, and the Biblioteca Central Militar. The University opened in connection with the Fiesta a Bibliographic Exposition of rare books, incunabula and codices. Also on display at the University Exposition were two thousand books acquired since the last Fiesta, many of them presented by the Cultural Institutes of France, Britain and Germany, and La Casa Americana.

Another indication of interest in books is the successful Book Fair, which was held in May and early June of this year. For it a double line of pavilions was erected along the Paseo de Recoletos, in front of the Biblioteca Nacional. Photographs of the Fair show attractive modernistic white booths, curved back from the sidewalk and lined with shelves, and each crowned with a shell-like hood. The dry climate of Castile makes possible such an open air display, and the lovely trees of Recoletos framed the pavilions. The Fair was sponsored by the *Vicesecretaría de Educacion Popular*, and was in charge of the *Instituto Nacional del Libro Español*. There were 94 booths, a real "city of the book." The Spanish railway network gave a discount to those attending the Fair, and people came from many parts of Spain. The only two

foreign countries represented were Portugal and Argentina. A catalog of the books exhibited has been published and contains 5,220 titles. The Fair was a success financially; during two weeks it averaged 50,000 visitors daily and sold 1,472,259 pesetas worth of books. In addition to the exhibits of publishers and bookstores, there were special displays of official government publications such as those of the Ministries of Agriculture, Industry and Commerce. Open air concerts, with bands and orchestras, and a "teatro guiñol" for the children, added gaiety to the Fair.

The books which sold best during the Fair may be some indication of current interests. They were, in this order: *Chistes*, by Joaquin Xaudaró (late caricaturist for *A B C* and *Blanco y Negro*); *Rimas*, by Becquer; *Una Chica Topolino*, by José Vivente Puente; *Aquel Madrid*, by Chispero; *Nueva York. Un Español entre rascacielos*, by Gaspar Tato Cumming; *Gente Bien*, by J. P. Marquand; *Historia de un Año*, by Mussolini; *Los que vivimos*, by Ayn Rand, and *Jane Eyre*, by Charlotte Brontë. This rather strange hodge-podge of translations and books of local interest, with a scattering of the classics, is typical of most of the lists of works published this year. It is reported that two of the most sought after books at the Fair were the *Obras completas* of Victor Pradera, with an introduction by General Franco, and the *Obras completas* of José Antonio, published by the Vice-secretaria de Educacion Popular.

Both the Fiesta and the Feria are symptomatic of a lively interest in books. But upon turning to the actual lists of what has been published, it is not easy to pick out distinguished names and titles. One is struck at once by the large number of religious works, and the astonishing number of translations, especially of United States authors. There are translations of Kenneth Roberts, Lloyd Douglas, Nordhoff and Hall, Marquand, Sinclair Lewis, as well as of Milton, Shakespeare (many of these), Bulwer Lytton, Dickens, J. B. Priestley, P. G. Wodehouse, James Hilton, Chateaubriand, Molière, Kipling, Stevenson, Edgar Wallace and H. G. Wells, to mention only a few. No translations of German works appeared. The Brontës seem to be enjoying a vogue; there are several translations of their novels, and a play based on *Wuthering Heights*, "Cumbres Borrascosas," by Aurelio Tejedor y Arturo Guasch. This large number of translations of both foreign classics and recent works would seem to reveal that Spain is still feeling the dislocations of the civil war, and the exile of many of her writers.

Among learned works published this year the following are worthy of note: *Catálogo Bibliográfico*, by Don Antonio de Guzman (no. 14); *Diccionario General Ilustrada de la Lengua Española*, with an introduction by Menendez Pidal, a linguistic dictionary announced for "immediate publication" by Editorial Spes, of Barcelona; the *Obras Completas* of Ramon del Valle Inclán, of which the first volume has a preface by Azorín and the second volume a preface by Benavente; *Lirica Popular de la Alta Extremadura*, compiled by M. García Mates, an exhaustive bibliography on the folk music, folk dances and costumes of the region; *Naufrajos* by Alvar Nuñez Cabeza de Vaca, with the text revised and a preface and notes by Justo García Morales (two works are published together under this title, i.e. "La relación . . . del gobernador Alvar Nuñez Cabeza de Vaca . . . y los Comentarios . . . por Pero Hernandez . . ."; *Vida y Hazanas de Don Fernando Alvarez de Toledo, Duque de Alba*, by P.

Antonio Ossorio, S.I., with a preface by the present Duke of Alba (this edition of a contemporary biography of the third Duke is described as a "great contribution to knowledge" about him); the *Obras Completas* of Baltasar Gracián, edited by Don Evaristo Correa Calderón; *Entremeses*, by Miguel Cervantes Saavedra, edited with notes by Adolfo Bonilla y San Martín; *Centenario del Estreno* de "Don Juan Tenorio," which contains "Los Valores Plásticos en el 'Don Juan' de Zorrilla," by Fernandez Jimenez Placer, "Zorrilla y sus Editores," by Francisco Cervera, and "El Drama 'Don Juan Tenorio,' Bibliografía y Comentarios" by Antonio Sierra Corella; *La Unidad del Idioma*, by D. Ramon Menendez Pidal (lecture given at the opening of the Asamblea del Libro Español); *Bio-bibliografía de Concha Espina*, by Francisco Valle de Juan; *La Imprenta en Extremadura, 1489-1800*, by Antonio Rodriguez Monino (an extensive bibliography).

Of especial interest to libraries, if and when they can be made available in this country, would be two catalogs which have been published in 1945: *Anuario del Libro y de las Artes Gráficas*, a classified list for 1944, and the fifth and last volume of the *Catálogo general de la Librería Española, 1900-1930* (volume four goes through Q).

Poetry in Spain just now seems to center about the two leading literary reviews in Madrid, both of which are edited by poets. They are *Corcel*, edited by the young Valencian poet Ricardo Juan Blanco, and *Garcilaso*, edited by "one of the best young poets of Spain," José García Nieto. Two older poets have published important works during the year: Vicente Aleixandre, *Sombra del Paraíso*, and Damaso Alonso, *Hijos de la Ira*. Both of the works reflect religious maturity, and the tragic experience of the civil war. A new Madrid publishing house, the Editorial Hispanica, has been publishing some striking collections of poetry. In the series "Adonais" one volume appears monthly; twenty have already been published. Some of these are new poets, and others are classics. Another series, called "Reino de la Literatura Castellana" is made up of anthologies edited by Don José Manuel Blecua; the one published this year is *El Mar en la Poesía Española*. Others published previously have been *Los Pájaros*, and *Las Flores*, in Spanish poetry. A recent volume from the Johns Hopkins University Press, *Contemporary Spanish Poetry; selections from ten poets*, translated by Eleanor Turnbull, with Spanish originals, and personal reminiscences of the poets by Pedro Salinas, is a valuable contribution to a knowledge of the poets of the present day. The book contains one hundred and forty-six poems with the translations printed on the opposite pages.

In fiction, as has already been pointed out, most of the titles are translations of foreign works, or reprints. *El Barco de la Muerte*, by Juan Antonio de Zunzunegui, is reviewed as the most ambitious and the most successful novel of an important novelist. A biography in fiction, *Don Juan de Austria, el Caudillo de Lepanto*, by Joaquín Martínez Frieria, suffers all the defects of this hybrid form. A one volume edition of the novels of Concha Espina has proved popular in spite of its bulk of 1,894 pages.

The above statement is also substantially true of published plays; here again one finds many translations, with Shakespeare leading in popularity, many new editions of both Spanish and foreign classics, and few new titles. *La Casa de Aizgorri*, by Pio Baroja, has been published in dramatic form by Espasa Calpe in Buenos Aires.

A play based on Daphne Du Maurier's *Rebecca* has been written by Enrique Rambal, Manuel Soriano Torres, and Jose Javier Perez Bulto.

There has been received in this country an interesting publication commemorating the twenty-fifth anniversary of the establishment of the *Hemeroteca Municipal* in Madrid: *Hemeroteca Municipal de Madrid*, Madrid, Artes Gráficas Municipales, 1945. This special library of newspapers and periodicals has grown from a very small collection to 160,000 volumes, in spacious and attractive quarters. The commemorative volume contains an essay by Azorin, "La Contingencia en la Hemeroteca Municipal," and one by Gregorio Maraón, "Dos Monologos sobre la Prensa y la Cultura." It also contains a *Bibliografía de la Historia de la Prensa Hispanica*, an amplification of the bibliography published by the *Hemeroteca* in 1929.

In January, 1945, the Count of Romanones was re-elected Director of the Academia de Bellas Artes, and Don Andres Ovejero, the art critic, was elected *Bibliotecario perpetuo*. Admiral Estrada, the Marqués de Luca de Tena, and the Arabist Don Emilio García Gomez were elected to the Real Academia de la Lengua, filling the seats left vacant by the deaths of Joaquín Alvarez Quintero, Manuel Linares Rivas, and Antonio Machado.

On May 30 occurred the death of Don José Castillejo, former Secretary of the *Junta para Ampliación de Estudios* in Madrid. In 1936 the Civil War drove him from Spain to England, where he had been living since; from 1941 to the time of his death he was a Lecturer in Hispanic Civilization at the University of Liverpool.

In May died P. Crisogono de Jesus, a leading authority on San Juan de la Cruz. He was, at the time of his death, about to be awarded the National Quater-centenary Prize for his biography of San Juan de la Cruz.

Don Salvador Bermúdez de Castro, Marqués de Lema, well known for his studies on the relations between Church and State, died in April, 1945.

Don Gustavo Gili, doyen of Catalan publishers, died in Barcelona in April.

NICHOLSON B. ADAMS.

SPELMAN FUND OF NEW YORK. The Spelman Fund was incorporated in 1928 with a principal of \$10,000,000. The Trustees of the Fund have power to use the principal as well as income to carry out its purposes. During 1945, the Fund continued its program directed at the improvement of methods and techniques in the field of public administration. Support was extended to public and quasi-public agencies engaged in disseminating information regarding advances in administrative practice, in developing new types of organization and operating methods, and in actually installing administrative improvements in governmental agencies. The Chairman of the Board of Trustees is Charles E. Merriam. The offices of the Fund are located at 49 West 49 Street, New York City.

SPORTS IN THE UNITED STATES. Few people realize the magnitude of our absorption in sports, both as amateur participants and as spectators of professional games.

Mr. Marty Berg, editor of *Sports-Week*, figures that eight out of ten people of the entire population, over 8 years old, either take part each year in one of the 125 national sports; patronize professional baseball, football, racing and the like; or are associated with the sports manufacturing and construction industries.

In consequence sports has grown into Big Business. Nearly four billions of the national income during 1945 went into sporting equipment, and the hundreds of other expenses a practising sportsman knows only too well; into paid admissions; and the hundreds of expenditures needed to provide the great professional shows.

Also, that four billions of dollars was small: it will be six billions during 1946. And this colossal activity and industry affects personally even the few Americans who do not take part, since, for example, New York State alone collected over 30 million dollars in race track taxes which otherwise would have had to come out of the already depleted public pocketbook.

The social effects of that, and the whole philosophy of sport, are not under discussion here. The social facts are a phenomenon well worth recording in its picturesque details.

Greatest Sports Year Ahead. With the war's end, all sports anticipate unparalleled popularity and participation. The greatest impetus behind the resurgence will be the release of 11 million men and women from the armed forces. Softball, one of the Army's most popular recreations, now holds an unprecedented number of participants. By September, 1945, the Army and Navy were purchasing sports equipment at the rate of \$28,000,000 annually. Included in the total purchases was sufficient equipment to outfit 100,000 softball teams and 50,000 baseball teams. Many hospitalized veterans received new introductions to sports through their therapeutic values. One survey among the armed forces revealed that nearly 75 percent of the servicemen intended to hunt or fish on their return to civilian life. Before the war, a minimum of 15,000,000 hunting and fishing licenses were issued annually. During the war, gasoline and tire restrictions forced motor boating, automobile racing, fishing, and practically all other sports that required travel by participants or spectators, into fretting dormancy.

However, the restrictions of the war did help to promote bowling, swimming and other sports whose facilities could be brought to the participants. Witness to bowling's growing popularity were the defense plants and Army camps and stations, where recreations centers invariably included bowling alleys. Collapsible bowling alleys were transported to U.S. troops in the Aleutian Islands.

Sport Highlights of the Year. The end of the war in Europe on May 8 signalled a record-shattering interest in major sports. Once restrictions were lifted, sports-hungry enthusiasts created new attendance and receipt records in horse racing, baseball, football and golf.

Horse racing reached the greatest national sports prominence with startling records in mutual betting and attendance. At least 20,000,000 persons, as estimated by the Thoroughbred Racing Associations of the United States, Inc., thronged to the nation's race tracks and passed \$1,306,514,314 through the mutual windows. New York State led with \$450,663,190 wagered by a record 4,623,123 racing fans. Betting at Belmont Park tolled a new mark of \$5,016,745 on September 22, and Jamaica held a national record crowd of 64,670 persons on Memorial Day. The Arlington-Washington Park tracks at Chicago were jammed by a total of 2,456,926 spectators.

Horse of the year was Louis B. Mayer's Busher, three-year-old daughter of War Admiral, who earned \$273,735 and won 10 of her 13 races. Hoop, Jr., owned by Fred W. Hooper, won the richest of Kentucky Derby prizes—\$64,850. Star Pilot, stable

mate of Beaugay from the Maine Chance Farm of Mrs. Elizabeth Graham, whose stable grossed \$589,170, won the Belmont Futurity and was voted the best juvenile colt of the season. Mrs. Elizabeth D. Jacob's Stymie topped the handicap field with \$225,375.

Contributions to worthy charities by racing associations was estimated at \$5,659,477, with New York tracks donating \$1,576,560.

New York realized over \$30,333,299 in taxes from state race tracks.

Harness racing drew \$40,000,000 in betting that reached its peak at the Roosevelt Raceway, Westbury, Long Island, where 17,000 persons wagered \$481,000 on August 8. Titan Manover, owned by E. Roland Harriman and Major Elbridge T. Gerry, was brilliant as the harness horse of the year, winning the Hambletonion in straight heats. His performances so outclassed competition that the public was not permitted to bet on him.

The scandal of stimulation cases near the close of the season blemished the flourishing race track year. The final results on the charges of stimulating horses with ephedrine are pending against seven eastern trainers.

Public enthusiasm for baseball, which had chafed under nearly four years of restrictions, provided one of the greatest box-office years in the history of the game. Despite the mediocre caliber of play, the two major leagues counted a record total of 11,375,135 spectators, with five major league teams enjoying more than a million admissions in home attendance.

The World Series shone as the richest bonanza of its kind when a record of 333,475 persons fixed the total receipts at \$1,492,454, plus \$100,000 for radio rights.

Major baseball sale of the year was the New York Yankees, with all its minor league chains, for \$2,800,000 to Larry McPhail, Dan Topping and Del Webb.

Baseball precedent fell when Jackie Robinson, Negro shortstop for the Kansas City Monarchs, was signed by Montreal of the International League.

Professional football drew 1,918,631 fans in 68 league games. The play-off between the Cleveland Rams and the Washington Redskins resulted in a new National League record of \$164,542 for a single game.

College football attendance leaped 35 per cent over the 1944 total as 7,262,147 fans packed stadia throughout the nation. Thirteen 1946 New Year's Day bowl games drew 397,000 persons.

Basketball popularity reached new heights, ignoring the bribery charges aimed at several members of the Brooklyn College team. Because of the widespread and diverse popularity of the sport, no accurate attendance figures are available. Madison Square Garden, however, was filled to capacity in 26 college double-header games that attracted 442,293 spectators.

Byron Nelson underscored his leadership in the field of professional golf. He won eighteen major tournaments and \$64,000 in war bonds to set a new earnings record. His largest purse was \$10,000, won at the Tam o' Shanter open at Chicago that drew a record crowd of 105,000 spectators and highlighted professional golf's greatest season.

Boxing followed the general sports boom and grossed approximately \$13,000,000, an increase of nearly \$3,000,000 over the estimated 1944 total. Despite the lack of major outdoor bouts, professional boxing receipts in New York State reached nearly \$4,000,000 in 1945, of which \$149,258 went to the State in taxes. California ranked second with

proceeds of \$1,984,363 and Pennsylvania was third with \$1,200,000. The New England States scored the biggest increase, next to New York, over the 1944 total. Massachusetts, Connecticut, Rhode Island, Maine and New Hampshire reported an aggregate of \$1,494,158, with Massachusetts registering \$987,535, nearly a 50 per cent increase over the 1944 total of \$644,667.

Some of the statistics that follow were made available by *Sports-Week*.

The information and statistics on horse racing would not have been possible without the cooperation of John I. Day, Jr., Service Bureau chief of the Thoroughbred Racing Associations of the United States, Inc. (See also articles on separate sports.)

ARCHERY

National Archery Association,
77 Franklin St., Boston, Mass.

Men's Team—Akron, O., Athletic Club

Women's Team—Cleveland, O., Athletic Club

With war production eliminating new hunting firearms and ammunition since 1940, the bow and arrow in some sections resumed its ancient place as a hunting weapon. During 1945 at least six deer were bagged in northeastern States.

BADMINTON

World Champion—Jack Purcell

BASEBALL

Professional

National Association of Professional Baseball Leagues,
111 Corcoran St., Durham, North Carolina. American Association of Professional Ball Players, 524 South Spring St., Los Angeles, Cal. Professional Baseball Government.

Champions

World Champions—Detroit Tigers, A.L.

Little World Series—Louisville Colonels, A.A.

League Champions

American—Detroit Tigers

National—Chicago Cubs

American Ass'n—Milwaukee Brewers

Am. Ass'n Playoff—Louisville Colonels

International—Montreal Royals

Int. Playoff—Newark Bears

Pacific Coast—Portland Beavers

Pacific Playoff—San Francisco Seals

Southern Ass'n—Atlanta Crackers

South. Ass'n Playoff—Mobile Shippers

Eastern—Utica Braves

East. Playoff—Albany Senators

Inter-State—Lancaster Red Roses

Int. St. Playoff—Lancaster Red Roses

Piedmont—Norfolk Tars

Pied. Playoff—Portsmouth Cubs

Appalachian—Kingsport Cherokees

App. Playoff—Kingsport Cherokees

Ohio State—Middletown Red Sox

Ohio St. Playoff—Middletown Red Sox

Pony—Batavia Clippers

Pony Playoff—Batavia Clippers

North Carolina State—Hickory Rebels

No. Carolina St. Playoff—Landis Millers

Carolina—Danville Leafs

Carolina Playoff—Danville Leafs

Individual Champions

Sid Mercer Memorial Plaque—George Stirnweiss, N.Y.

Yankees

Most Valuable Player, A.L.—Hal Newhouser, Detroit

Tigers

Most Valuable Player, N.L.—Phil Cavaretta, Chicago Cubs

Leading Batsman, A.L.—George Stirnweiss, N.Y. Yankees

Leading Batsman, N.L.—Phil Cavaretta, Chicago Cubs

Amateur

Central Office for Eastern Intercollegiate Athletics,
Biltmore Hotel, New York, N.Y.

Eastern Intercollegiate—Princeton

Western Intercollegiate—Michigan

Metropolitan Conference—New York

All-American Boys—East

F.S.A.L.—Grover Cleveland High

C.H.S.A.A.—Brooklyn Prep

BASKETBALL

Amateur

National Basketball Committee
National Collegiate Athletic Association

National Collegiate A.A.—Oklahoma A.&M.

National Invitation—De Paul

Eastern—Army

Eastern Intercollegiate—Pennsylvania

Big Six Conference—Iowa State

Big Seven Conference—Utah

Missouri Valley Conf.—Oklahoma A.&M.

National A.A.U. (Men)—Bartlesville (Okla.) Phillips

National A.A.U. (Women)—Nashville (Tenn.) Convacs

Negro Intercollegiate—Florida A.&M.

Pacific Coast Conference:

Northern Division—Oregon

Southern Division—U.C.L.A.

Southeastern A.A.U.—Tyndall Field, Fla.

Southeastern Conference—Kentucky

Southern Conference—North Carolina

Southwest Conference—Rice

Southwestern Border Conf.—New Mexico

Western Conference—Iowa

F.S.A.L.—De Witt Clinton High School

C.M.S.A.A.—St. John's Prep

Professional

World—Fort Wayne (Ind.) Zollners

National League—Fort Wayne (Ind.) Zollners

American League—Philadelphia Sphas

All American

(Selected by Helms Athletic Foundation)

Forwards:

Hal Henry, Rice

Dale Hall, Army

Howard Schultz, Hamline

Max Morris, Northwestern

George Mikan, DePaul

Vince Mason, Wash. State

Guards:

Robert Kurland, Okla. A.&M.

Adrian Back, Jr., Navy

Walton Kirk, Jr., Illinois

Herbert Wilkinson, Iowa

High Scorer—George Mikan, DePaul, 558 points

BICYCLING

Amateur Bicycle League of America,
144 East 208th St., Brooklyn, N.Y.

NABAA Jr. Men

25 Mile—Warren Bare, Detroit, Mich.

10 Mile—Ed Littig, Belleville, N.J.

5 Mile—Ted Smith, Buffalo, N.Y.

1 Mile—Robert Travini, Detroit, Mich.

Men's Champion—Ted Smith, Buffalo, N.Y.

NABAA Women

5 Mile—Mildred Deitz, St. Louis, Mo.

3 Mile—Georgia McClusky, Detroit, Mich.

1 Mile—Kay Montgomery, New York, N.Y.

Women's Champion—Mildred Deitz, St. Louis, Mo.

NABAA Jr. Boys

5 Mile—S.W. Busch, Buffalo, N.Y.

3 Mile—Busch

1 Mile—Busch

NABAA Stock Bike

Richard Berg, Chicago, Ill.

Final Point Standing

61—Arthur Lauf, Hydes, Md.

40—James Lauf, Hydes, Md.

37—Ted Smith, Buffalo, N.Y.

26—Paul Luders, Long Island, N.Y.

25—Ernest Seubert, New York, N.Y.

22—Nick Steder, Chicago, Ill.

21—E. J. Fisher, Buffalo, N.Y.

18—Robert Travini, Detroit, Mich.

17—Tom Montemage, Buffalo, N.Y.

15—Joe Cote, Worcester, Mass.

BILLIARDS

Billiard Association of America,
629 So. Wabash Ave., Chicago, Ill.

World Three Cushion—Welker Cochran, San Francisco, Cal.

World Pocket—Willie Masconi, Toledo, Ohio

Nat. Amateur Three Cushion—Edward Lee, New York, N.Y.

No women's or intercollegiate tournaments held in 1945.

BOATING

Class A Hydroplane—Tom DeWitt, Phoenix, Ariz.

BOXING

Professional

New York State Boxing Commission
National Boxing Association

Heavyweight—Joe Louis, Detroit, Mich.

Light-Heavyweight—Gus Loevenich, Cliffside Park, N.Y.

Middleweight—Tony Zale, Gary, Ind.
Welterweight—Fred Coochrane, Elizabeth, N.J.
Lightweight—Bob Montgomery, Phila., Pa. (Recognized by N.Y. State Athletic Commission.) Ike Williams, Camden, N.J. (Recognized by National Boxing Association.)

Featherweight—Willie Pep, Hartford, Conn.
Bantamweight—Manuel Ortiz, El Centro, Cal.
Flyweight—Jackie Patterson, Scotland.
Edward J. Neill Trophy—James J. Walker
Fighter of the Year—Willie Pep, selected by *The Ring*, a boxing publication, because he successfully defended his title eight times, displayed excellent sportsmanship and served honorably in both the Army and Navy.

Amateur

Golden Gloves

Heavyweight—Luke Baylark, Chicago, Ill.
 175 lbs.—Roland La Starza, New York, N.Y.
 160 lbs.—Howard Brodt, New York, N.Y.
 147 lbs.—Laverne Roach, Plainville, Tex.
 135 lbs.—Elbert Highers, Utica, N.Y.
 126 lbs.—Wray Carter, Chicago, Ill.
 118 lbs.—Adolfo Calderon, San Juan, P.R.
 112 lbs.—Francisco Garcia, San Juan, P.R.

Eastern Intercollegiate

Team—Coast Guard Academy
Heavyweight—George Richardson, Coast Guard Academy
 175 lbs.—J. L. Wright, Coast Guard Academy
 165 lbs.—John Castle, West Point
 155 lbs.—Amos Jordan, West Point
 145 lbs.—Stephen Connor, West Point
 135 lbs.—Allen Pearce, Coast Guard Academy
 127 lbs.—Brian O'Hara, Coast Guard Academy
 120 lbs.—Peter Thistle, Coast Guard Academy

Amateur Athletic Union

Heavyweight—Charles Lester, Cleveland, O.
 175 lbs.—Richard Nutt, Alexandria, Va.
 160 lbs.—Allen Faulkner, Buffalo, N.Y.
 147 lbs.—Abe Lee, Chicago, Ill.
 135 lbs.—Jesoun Arnold, Phila., Pa.
 126 lbs.—Virgil Franklin, Okla. City, Okla.
 118 lbs.—Amos Aitson, Okla. City, Okla.
 112 lbs.—Keith Hamilton, New Orleans, La.

BOWLING

American Bowling Congress, 2200 North Third St., Milwaukee, Wis.

Women's International Bowling Congress, 85 East Gay St., Columbus, O.

Singles—Buddy Bomar, Chicago, Ill.
Doubles—William Kenet, Detroit, Mich., and Walter Rappenhagen, Detroit, Mich.

Team—Eckhardt and Becker Brewers, Detroit, Mich.
 The American Bowling Congress has not staged a tournament since 1942 "Holdover" champions are:
Singles—John J. Stanley, Cleveland, O.
All Events—Stanley Moskal, Saginaw, Mich.
Team—Budweiser, Chicago, Ill.
Doubles—George Baier, Milwaukee, Wis.; Ed Nowicki, Cudahy, Wis.

BRIDGE

American Contract Bridge League, 35 West 33rd St., New York, N.Y.

World Championship Masters' Events

Masters' Pair—M. A. Lightman, Memphis, Tenn., and Robert Appleyard, Forest Hills, N.Y.
Masters' Teams—Oswald, Jacoby, Dallas, Texas, T. A. Lightner, New York, N.Y., Sam Fry, Jr., New York, N.Y., Howard Schenken, New York, N.Y., and Edward Hymes, Jr., New York, N.Y.
Masters' Individual—Charles H. Goren, Phila., Pa.

National Championships

Open Pairs—Mr. & Mrs. Lewis Jaeger, New York, N.Y.
Open Teams—Lee Hasen, New York, N.Y., Waldemar von Zedtwitz, New York, N.Y., George Rapae, New York, N.Y., and Sam Stayman, New York, N.Y.
Vanderbilt Cup—Helen Sobel, New York, N.Y., and B. Jay Becker, New York, N.Y., Charles H. Goren, Phila., Pa., and Sidney Silodor, Phila., Pa.
Men's Pairs—Lee Hasen, New York, N.Y., and Sylvester Gintall, New York, N.Y.
Mixed Teams—Ruth Sherman, New York, N.Y., and Waldemar von Zedtwitz, New York, N.Y., Mrs. W. Wagar, Atlanta, Ga., and John Crawford, Phila., Pa.
Mixed Pairs—Mrs. W. Wagar, Atlanta, Ga., and John Crawford, Phila., Pa.
Women's Teams—Mrs. R. C. Young, Bywood, Pa., Mrs. J. E. Folline, Richmond, Va., Mrs. A. M. Sobel, New York, N.Y., Mrs. W. Wagar, Atlanta, Ga.,
Women's Pairs—Olive A. Peterson, Phila., Pa., and Mrs. B. M. Golder, Phila., Pa.

Amateur Teams—Ernst Theimer, East Orange, N.J., and Lee Sager, East Orange, N.J., L. A. Doyle, Montclair, N.J., and D. F. Geortner, So. Orange, N.J.
Amateur Pairs—O. Jack Bonney, Long Island City, N.Y., and Bernard Lampert, Brooklyn, N.Y.

Eastern States Championship

Open Pairs—Ned Drucker, New York, N.Y., and Jerry Friedlander, New York, N.Y.
Open Teams—L. M. Jaeger, New York, N.Y., Mrs. L. M. Jaeger, New York, N.Y., Joseph Low, New York, N.Y., Mason Lichtenstein, New York, N.Y., and Henry Sonnenblick, New York, N.Y.
Mixed Pairs—Barbara Cook, New York, N.Y., and Ambrose Casner, New York, N.Y.
Mixed Teams—Mrs. B. C. Young, Phila., Pa. Tie—Mrs. L. M. Jaeger, New York, N.Y., Sam Katz, New York, N.Y., Peter Leventritt, New York, N.Y., tied with Mrs. F. S. Kreps, Maplewood, N.J., Constance Little, Maplewood, N.J., F. S. Kreps, Maplewood, N.J., and Lee Sager, East Orange, N.J.
Women's Pairs—Helen Sobel, New York, N.Y., and Ruth Sherman, New York, N.Y.
Amateur Pairs—Mrs. Dorothy Berning, Chicago, Ill., and Sims Guckenheimer, New York, N.Y.

CASTING

National Association of Angling and Casting Clubs, 7010A Tulane Ave., University City, Mo.

All-Distance—Ernest Liotta, Jr., Cleveland, O., 3015 ft., aggregate for tournament.
Distance Baits—Charles L. Schall, St. Louis, Mo., 2099 ft., aggregate for tournament.
Distance Flies—Dick Miller, Huntington Beach, Cal., 988 ft., aggregate for tournament.
All-Accuracy—Harry McDonald, Chicago, Ill., and Henry Fujita, Sr., Cleveland, O., tied, 382 points.
Women's All-Accuracy—Lois Barrie, Toledo, O., 357 points.
Accuracy Baits—Barry McDonald, Chicago, Ill., 191 points.
Accuracy Flies—Henry Fujita, Sr., Cleveland, O., 195 points.
Junior All-Accuracy—Marion Garber, Toledo, O., 372 points.

NAACC Distance

$\frac{1}{2}$ -oz. Bait—Charles Schall, St. Louis, Mo., 393
 $\frac{1}{2}$ -oz. Bait—William Lovely, St. Louis, Mo., 349
Salmon Fly—Dick Miller, Huntington Beach, Cal., 192
Trout Fly—Marvin Hedge, Portland, Ore., 161

NAACC Accuracy

Dry Fly—Henry Fujita, Sr., Cleveland, O., 97
Wet Fly—Ernest Liotta, Jr., Cleveland, O., 99
 $\frac{1}{2}$ -oz. Bait—S. G. Dennis, Chicago, Ill., 99
 $\frac{1}{2}$ -oz. Bait—Ernest Liotta, Jr., 97

NAACC Women's Accuracy

Dry Fly—Joan Salvato, Paterson, N.J., 91
Wet Fly—Joan Salvato, 95
 $\frac{1}{2}$ -oz. Bait—Dorothy Vogel, Paterson, N.J., 95
 $\frac{1}{2}$ -oz. Bait—Caroline Liotta, Cleveland, O., 93

NAACC Junior's Accuracy

Dry Fly—Marion Garber, Toledo, O., 95
Wet Fly—Bob Riedmayer, Toledo, O., 99
 $\frac{1}{2}$ -oz. Bait—Charles Sutphin, Indianapolis, Ind., 96
 $\frac{1}{2}$ -oz. Bait—Paul Brewer, Chicago, Ill., 97

NAACC Skish

Men's Bait—A. M. Herrett, Rocky River, O., 64
Men's Fly—George Applegan, Jr., Chicago, Ill., 87
Women's Bait—Mollie Budd, Jeffersonville, Ind., 64
Women's Fly—Joan Salvato, Paterson, N.J., 70
Junior Bait—Charles Sutphin, Indianapolis, Ind., 69
Junior Fly—Norman Taxman, Chicago, Ill., 72

NAACC Team

$\frac{1}{2}$ -oz. Bait—Capitol City Casting Club, Indianapolis, Ind.

U.S. All-Time Fly Cast

Salmon—192, R. Piro, Sr., and D. Miller
Trout—159, J. Sparks (rod unlimited)
Trout, not over 8 oz. Rod—165, E. Anderegg.
Trout, not over 6 oz. Rod—183, R. Miller.
Trout, not over 5 oz. Rod—131, C. Chaff.

U.S. All-Time Bait Cast

$\frac{1}{2}$ oz.—no record.
 $\frac{1}{2}$ oz.—258, W. Newcomb.
 $\frac{1}{2}$ oz.—385, O. Anthas.
 $\frac{1}{2}$ oz.—422, W. Lovely.
 $\frac{1}{2}$ oz.—417, L. Sans.

ALL-TIME FISHING RECORDS

(Museum of Natural History, New York, N.Y.)

SIX-THREAD RECORDS														
	Scientific Name	Weight	Length	Girth	Place	Date	Angler	Line	Weight	Length	Girth	Place	Date	Angler
ALBACORE	<i>Germes alalunga</i>	66 lbs. 4 os.	.....	.....	Santa Catalina, Calif.	1912	F. Kelly	9	55½ lbs.	.....	.....	Catalina, Calif.	1927	W. DeMille
AMBERJACK	<i>Seriola lalandi</i>	106 lbs.	5' 8½"	37"	Pasaggrille, Fla.	Mar. 21, 1937	H. M. Harker	24	58 lbs. 8 oz.	53½"	32½"	Islamorada, Florida	Feb. 2, 1941	W. Harborn
BARRACUDA, (Great)	<i>Sphyræna barracuda</i>	103½ lbs.	5½'	31½"	Bahama Islands	1932	C. A. Benet	...	...	...	...	(No record available)	...	...
BASS, (Cal. Black Sea)	<i>Sterolepis grisea</i>	515 lbs.	.....	.....	Santa Catalina, Calif.	1916	Wallace Beery	...	75½ lbs.	41"	38"	Huntington Beach, Cal.	June 27, 1942	H. E. Verhoe
BASS, (Cal. White Sea)	<i>Cynoscion nobilis</i>	74 lbs. 4 os.	6' 4"	30"	Playa del Rey, Calif.	Mar. 8, 1941	W. M. Hartness	9	46½ lbs.	.....	.....	Catalina, Calif.	May 20, 1909	A. L. Beebe
BASS, (Channel)	<i>Sciaenops ocellatus</i>	75½ lbs.	64½"	41"	Cape Hatteras, N. C.	Nov. 29, 1941	B. R. Ballance	15	40½ lbs.	46"	25"	Titusville, Fla.	June 24, 1939	L. S. Caine
BASS, (Sea)	<i>Centropristis striatus</i>	8 lbs. 2 os.	.....	.....	Banks off New York	.....	P. Volkman	...	...	...	...	(No record available)	...	...
BASS, (Striped)	<i>Roccus lineatus</i>	73 lbs.	60"	30½"	Vineyard Sound, Mass.	Aug. 17, 1913	C. B. Church	...	57 lbs.	55½"	34½"	Narragansett, R. I.	July 26, 1944	J. Sylvester
BLACKTIEFISH (or Tautog)	<i>Tautoga onitis</i>	21 lbs. 2 oz.	30"	21½"	Sheepshead Bay, N. Y.	Nov. 30, 1937	A. von Kleist	...	...	...	...	(No record available)	...	...
BLUESFISH	<i>Pomatomus saltatrix</i>	25 lbs.	est. 42"	.....	Cohasset Narrows, Mass.	June 16, 1874	L. Hathaway	24	...	...	...	(No record available)	...	...
BONNETER	<i>Albula vulpes</i>	13½ lbs.	31"	17"	Bimini, Bahama Isla.	Mar. 9, 1919	B. F. Peek	9	...	...	...	(No record available)	...	...
CERO (or Florida Kingfish)	<i>Scomberomorus cavalla</i>	73½ lbs.	62"	32"	Bimini, Bahama Isla.	Feb. 1935	L. B. Harrison	...	...	...	...	(No record available)	...	...
DOLPHIN	<i>Coryphæna hippurus</i>	67½ lbs.	68½"	37½"	Waianae, Oahu, T. H.	Aug. 19, 1940	F. McNamara	36	36 lbs. 13 os.	59"	27½"	Guaymas, Mexico	June 30, 1945	G. L. Green
DELM, (Black)	<i>Pogonias cromis</i>	90 lbs.	.....	.....	Surf City, N. J.	June 21, 1925	Jack Inman	..	...	...	...	(No record available)	...	...
FLYBINDER (Summer)	<i>Paralichthys dentatus</i>	19 lbs.	.....	.....	Banks off New York	c. 1895	Fred Foster	..	...	...	...	(No record available)	...	...
JEWFISH	<i>Promicrops guttatus</i>	542 lbs.	.....	.....	Sarasota, Fla.	May, 1923	W. E. Lincoln	...	...	...	...	(No record available)	...	...
MACKIN, (Blue)	<i>Makaira nigricans</i>	737 lbs.	13' 1"	72"	Bimini, Bahama Isla.	July 16, 1941	J. V. Martin	39	...	...	...	(No record available)	...	...
MACKIN, (Pacific Black)	<i>Makaira nigricans</i>	976 lbs.	12' 8"	6' 2"	Bay of Isla, N. Z.	Feb. 25, 1926	Laurie Mitchell	36	...	...	...	(No record available)	...	...
MACKIN, (Silver)	<i>Makaira nigricans tahitensis</i>	618½ lbs.	11' 6"	5' 2"	Tahiti	March, 1930	Zane Grey	39	...	...	...	(No record available)	...	...

U.S. All-Time Surf Cast

World—705 ft., 4 in., by August "Primo" Livenais, Jr., with 4 os. lead off Monterey, Cal., on Aug. 25, 1940.
East Coast—570 ft., by Ralph Bowman off Margate City, N.J. on Aug. 27, 1939.

CHESS**U. S. Chess Federation**

World—Dr. Alexandre Alekhine, Paris.
Men's U. S.—Arnold S. Denker, Forest Hills.
Women's United States—Mrs. Gisela Kahn Gresser, New York.
U. S. Open—Anthony E. Santasiere, New York.
United States Speed—Reuben Fine, Washington.
United States Amateur—Paul R. Ellis, New York.
Western Hemisphere—Samuel Reshevsky, Boston.
New York State—George Kramer, Rego Park.
Women's, Pan-American—Mrs. Mary Bain, Miami, Fla., and Miss N. May Karff, Boston (tie).
Intercollegiate League—Brooklyn College.
Daniel Levine Memorial—Kelvin Flesslet, City College, N.Y.
H.Y.P.D. College—Yale-Harvard tie.
Metropolitan Chess League—Manhattan Chess Club.
Grau Memorial—Buenos Aires.
International Radio—U.S.S.R.

COURT TENNIS

Payne Whitney Doubles—Ogden Phipps and John Hay Whitney, Long Island, N.Y.

CROSS-COUNTRY

National Senior—Tommy Quinn, New York A. C.
National Senior Team—New York A. C.
Intercollegiate—John T. Hanley, Dartmouth.
Intercollegiate Team—Army.
N.C.A.A.—Fred Feiler, Drake.
N.C.A.A. Team—Drake.
Metropolitan Senior—Tommy Quinn.
Metropolitan Senior Team—New York A. C.
Metropolitan Intercollegiate—Alex Jordan, N.Y.U.
Metropolitan Intercollegiate Team—N.Y.U.
Heptagonal Association—John T. Hanley.
Heptagonal Association Team—Army.
P.S.A.L. Team—John Adams.
C.H.S.A.A. Team—Bishop Loughlin Memorial.

CURLING

Gordon Medal—Caledonian C.C., New York, N.Y.
Emmet Medal—Utica C.C. No. 2.
Douglas Medal—Toronto.
Hill Cup—J. Edgar Rutledge, Fort Williams, Ontario.
Lady Gilmore Trophy—Ottawa Rideau.
Munson Shield—Utica C.C. No. 2.
Royal Victoria Jubilee—Royal Montreal.
Seiberling Trophy—Royal Canadians.
Quebec Challenge Cup—Perth C.C.
Sewell Women's Trophy—Toronto Granites.

FENCING

Amateur Fencers League, 15 Whitehall St., New York, N.Y.

Saber—Norman C. Armutage, Fencers Club, N.Y.
Epee—Max Gilman, Illinois Division.
Foil—Dernell Avery, New York Athletic Club, N.Y.
Foil, Women's—Maria Cerra, Fencers Club, N.Y.
Saber, Team—Olympic Club, San Francisco, Cal.
Women's Team—Fencers Club, N.Y.

FIELD HOCKEY

National Women—All Philadelphia, Phila., Pa.

FOOTBALL**Amateur****U.S. Football Association**

National—Army
Lambert Trophy—Army
Eastern (Lambert Trophy)—Army
East Ivy League—Pennsylvania
Western Conference—Indiana
Southern Conference—Duke
Southeastern Conf.—Alabama
Southwest Conf.—Texas
Pacific Coast Conf.—Southern California
Big Six Conference—Missouri
Missouri Valley Conf.—Oklahoma A.&M.
Big Seven Conference—Denver

Bowl Games

(Including those played Jan. 1, 1946)

Azalea—Knoxville University
Coconut—Bethune-Cookman

Cotton—Texas
East-West—Tie
Flower—Louisiana Normal
'Gator—Wake Forest
Oil—Georgia
Orange—U. of Miami
North-South—North
Raisin—Drake
Rose—Alabama
Sugar—Oklahoma A.&M.
Sun—New Mexico U.
Vulcan—Tennessee State
China Bowl (Shanghai)—Navy
Spaghetti (Italy)—5th Army
Tokyo—11th Airborne Division

Individual

Heisman Trophy—Felix A. Blanchard, Army
Walter Camp Trophy—Felix A. Blanchard
George Bulger Lowe Trophy—Stan Koslowski, Holy Cross
Knute Rockne Trophy—Richard Duden, Navy

All American

(Selected by American Football Coaches Assoc.)

Fullback—Felix A. Blanchard, Army
Quarterback—Glenn Davis, Army
Halfbacks—Herman Wedemeyer, St. Mary's and Bob Fenimore, Oklahoma A.&M.
Ends—Richard Duden, Navy and Max Morris, Northwestern
Tackles—De Witt Coulter, Army and George Savitsky, Pennsylvania
Guards—John Green, Army and Warren Amling, Ohio State
Center—Richard Scott, Navy

Professional

National League—Cleveland Rams
Eastern Division—Washington Redskins
Western Division—Cleveland Rams
Pacific Coast—Hollywood Bears

GOLF**Professional Golf Association**

U.S. Golf Association, 73 East 57th St., New York, N.Y.

Men

All-American Open—Byron Nelson, Toledo, O.
National P.G.A.—Byron Nelson
All-American Amateur—Art Doering, Denver, Col.
Victory National—Byron Nelson
New Jersey Open—Frank Kringle, Sunnysfield, N.J.
Westchester P.G.A.—Fred Annon, Innis Arden
New Jersey P.G.A.—Emory Thomas, Forest Hill, N.J.
Metropolitan P.G.A.—Clarence Doser, Scarsdale, N.Y.
Long Island P.G.A.—Pat Cici, Nassau County Park, N.Y.
N.Y. State Amateur—Ray Billows, Poughkeepsie, N.Y.
Met. Amateur—Frank Strafacci, Shore View, N.Y.
Long Island Amateur—Tom Strafacci, Plandome, N.Y.
New Jersey Amateur—Stanley Calder, Montclair, N.J.
U.S. Senior—Ellis Knowles, Apawanna, N.Y.
P.G.A. Senior—Eddie Williams, Chicago, Ill.
Atlanta Iron Lung—Byron Nelson
Azalea Open, Mobile—Sam Byrd, Detroit, Mich.
Big Four Invitation—Sam Byrd
Charlotte, N.C., Open—Byron Nelson
Corpus Christi, Texas, Open—Byron Nelson
Dallas, Texas, Open—Sam Snead, White Sulphur Springs, W.Va.

Durham, N.C., Open—Byron Nelson
Fort Worth, Texas, Open—Byron Nelson
Greensboro, N.C., Open—Byron Nelson
Gulfport, Miss., Open—Sam Snead
Knoxville, Tenn., Open—Byron Nelson
Los Angeles Open—Sam Snead
Miami, Fla., Intl. 4-Ball—Byron Nelson and Harold McSpaden, Sanford, Me.
Miami, Fla., Mixed 2-Ball—L. Suggs and E. Christianson, Miami, Fla.
Miami, Fla., Open—Henry Picard, Cleveland, O.
Nashville, Tenn., Open—Ben Hogan, Hershey, Pa.
New Orleans, La., Open—Byron Nelson
North-South Am.—Ed Furgol, Detroit, Mich.
Orlando, Fla., Open—Ben Hogan
Pensacola, Fla., Open—Sam Snead
Philadelphia, Pa., Inquirer—Byron Nelson
Phoenix, Ariz., Open—Byron Nelson
Pike's Peak, Col., Open—Lt. John Thoren, U.S. Army
Richmond, Va., Open—Ben Hogan
Rocky Mt. Open—Barney Clark, Denver, Col.
Seattle, Wash., Open—Byron Nelson (259, New P.G.A. Record)
Southwest Invitation—Sam Snead
Spokane, Wash., Open—Byron Nelson
Tacoma, Wash., Open—Jimmy Hines, Chicago, Ill.
Texas Open—Sam Byrd
Tucson, Ariz., Open—Ray Mangrum, Los Angeles, Cal.
U.S., E.T.O., Armed Forces—Cpl. Lloyd Mangrum

Women

Western Open—Mrs. Mildred Didrikson Zaharias, Los Angeles, Calif.
 Western Amateur—Miss Phyllis Otto, Atlantic, Iowa.
 All-American—Miss Patty Berg, Minneapolis
 New York State—Miss Kathleen S. Byrne, Westchester C. C.
 United States Senior—Mrs. S. Hinman Bird, Tamarack C. C.

OUTSTANDING TROTTING AND HARNESS HORSES

Horse	Time	Type	Won	Trainer and Driver	Owner
Ensign Hanover	2:04½	2 yr. pacer	\$31,327.45	Sep Palin	James B Johnson
Deanna Hanover	2:04	2 yr. trotter	24,263.28	Gibson White	Gibson White
True Chief	1:59½	3 yr. pacer	24,768.49 ('44)	Tom S. Barry	Leo C. McNamara
Titan Hanover	1:58	3 yr. trotter	35,273.26	Harry Pownall	E. Roland Harriman
Darnley	1:50½ ('44)	5 yr. trotter	.....	Harry Whitney	Elbridge T. Gerry
Adios	1:59½	5 yr. pacer	.....	Frank Ervin	Aaron F. Williams
					L. K. Shapiro

Sep Palin was the leading money winner with \$77,431.07 and led the Grand Circuit drivers with 41 victories.

New Jersey Association—Miss Maureen Orcutt, Ridgewood C. C.
 Texas Women's Open—Mildred Didrikson Zaharias
 North-South Women's Open—Estelle Lawson Page

Intercollegiate

N. C. A. A. Team—Ohio State
 Eastern—Army
 Big Ten—Ohio State
 N. C. A. A. Individual—John Lorms, Ohio State
 N. C. A. A. Medalist—Howard Baker, Ohio State

GYMNASTICS

Men's National A.A.U. Champions

All-Around—Frank Cumiskey, Union City
 Calisthenics—Arthur Pitt, Union City.
 Long Horse—Frank Cumiskey
 Side Horse—Frank Cumiskey
 Horizontal Bar—Frank Cumiskey.
 Parallel Bars—Frank Cumiskey
 Flying Rings—Waldimir Baskovich, Chicago
 Tumbling—Irvin Bedard, Chicago
 Rope Climb—Stephen Greene, Penn State.
 Indian Clubs—Ed Henning, Cleveland.
 Team—Penn State.

Women's National A.A.U. Champions

All-Around—Clara Schroth, Philadelphia Turners
 Calisthenics—Clara Schroth
 Side Horse Vault—Tie between Clara Schroth and Marian Twining, Loyal Order Moose Lodge 54
 Balance Beam—Clara Schroth
 Flying Rings—Helm McKee, Loyal Order Moose Lodge 54
 Parallel Bars—Marian Twining, Loyal Order Moose Lodge 54
 Indian Clubs—Margaret Dutcher, Ridgewood H S, N.J.
 Tumbling—Leonora Owens, Herrmann's Phy Tr. Inst., Phila., Pa.
 Team Drill—Elizabeth Y. W. H. A., N.J.

HANDBALL

Four-Wall Softball

Singles—Joseph Platak, Chicago, Ill.
 Y. M. C. A. Singles—D. Bennett
 Doubles—Sam Atcheson and Ed Dettweiler, Memphis, Tenn.
 Y. M. C. A. Doubles—D. Bennett and P. Pearlman

HARNESS RACING

U. S. Trotting Association, 525 Main St., Hartford, Conn.
 Hambletonian—Titan Hanover
 National Trot—Titan Hanover
 Champion Stallion Stake—Titan Hanover
 American Stake Trot—3 year old—Errol Hanover
 Oaks Trotting Stake—Beatrice Hanover
 Pacer—2 year old—Ensign Hanover (2:04½)
 Trotter—2 year old—Deanna (2:04)
 Pacer—3 year old—True Chief (1:59½)
 Trotter—3 year old—Titan Hanover (1:58)
 Pacer—Aged—Adios (1:57½)
 Trotter—Aged—Darnley (2:00½)
 Leading Driver, Winners—Edward P. Jones, Franklin, Mass.
 Leading Driver, Money—Sep Palin, Indianapolis, Ind.

HORSE RACING

Thoroughbred Racing Assoc. of the United States, Inc., 400 Madison Ave., New York, N.Y.
 Turf Committee of America, 745 Fifth Ave., New York, N.Y.

In the banner horse racing year of 1945, the following facts predominated:

In eighteen of the twenty states in which racing was conducted on a major scale, revenue to the states aggregated \$65,484,121.30.

Louis B. Mayer's filly, Busher, by War Admiral and Baby League, was the leading money-winning horse of 1945 with total purse earnings of \$273,785.

John Longden was the leading rider as measured by purses won by his mounts, the total being \$981,977, a record for one year.

Most successful owner was Mrs. Elizabeth N. Graham, of the Elizabeth Arden cosmetic fame, owner of the Maine Chance Farm. Her horses won 58 races, were 22 times second and 17 times third for a total earning of \$589,170.

Stanley Lipiec was the leading trainer according to the number of winners trained. He won 127 races and his horses earned a total of \$238,361. Tom Smith (trainer of Mrs. Graham's Maine Chance Farm) was the leader in money won, \$589,170. According to Mr. Day of the Thoroughbred Racing Associations of the U.S., Inc., Smith

SUMMARY OF SALES

Sale	No. Sold	Amount	Average
Keeneland (Summer)	405	\$3,134,250	\$7,739
Meadowbrook	155	633,100	4,085
Keeneland (Fall)	276	999,750	3,622
Maryland	23	43,750	1,902
California	63	122,000	1,937

should be named the top trainer of the year inasmuch as he developed a sensational string of two-year-olds for Maine Chance while Lipiec handled cheaper horses, many of which he claimed when they were at a peak of form.

1945 AMERICAN LEADERS

OWNERS				
Owner	1st	2nd	3rd	Won
Maine Chance Farm	58	22	17	\$589,170
Louis B. Mayer	37	24	11	533,100
Calumet Farm	50	47	16	371,659
William Helis	49	45	36	379,150
Mrs. E. D. Jacobs	38	32	17	306,675

JOCKEYS

Jockey	Mounts	1st	2nd	3rd	Pctg.	Won
J. D. Jessop	1085	290	182	168	.27	\$303,684
B. Nichols	1088	187	168	135	.17	356,757
T. Atkinson	957	182	158	124	.19	746,585
J. Longden	778	180	112	100	.23	981,977
E. Wright	706	164	140	90	.23	341,415

TRAINERS

Trainer	Races Won	Amount Won
S. Lipiec	127	\$238,361
L. Sierra	104	83,040
T. Altamira	97	89,276
H. Jacobs	95	499,985
G. Ellis	67	71,28

STALLIONS

Horse	Get	1st	2nd	3rd	Won
War Admiral	26	58	39	34	\$588,997
Challenger II	71	116	110	117	480,710
Bull Dog	68	137	110	102	439,758

Although more yearlings have been sold in other years, the 992 yearlings sold at auction in 1945 fetched a record total of \$5,091,420, for an average of \$5,132.

The highest prices paid at any of the sales sessions occurred at Keeneland where Mrs. Elizabeth N. Graham made bids of \$46,000 for a filly by Blue Larkspur-Risk

LEADING RA

Races	Eligible	Dist.	Track	Winner	Age	Time	Value	Sire
Alabama Stakes	3 yr.*	1 1/4 m.	Saratoga	Sicily	3	2:03 1/2	\$21,015	Reaping Reward
American Derby	3	1 1/4 m.	Wash. Pk.	Feather Step	3	2:02 1/2	58,850	Fighting Fox
Arlington Futurity	2	1/2 m.	Arlington Pk.*	Spy Song	2	1:12	58,850	Balladier
Arlington Handicap	3 & up	1 1/4 m.	Arlington Pk.*	Busher	3	2:03 1/2	36,900	War Admiral
Beldame Handicap	3 & up	1 1/4 m.	Aqueduct	War Date	3	1:51	24,100	Case Ace
Belmont Stakes	3 & up	1 1/4 m.	Belmont Pk.	Pavot	3	2:30	52,775	Equestrian
Brooklyn Handicap	3 & up	1 1/4 m.	Belmont Pk.	Stymie	4	2:02	39,120	Alcasar
Butler Handicap	3 & up	1 1/4 m.	Empire City	Stymie	4	1:56 1/2	38,770	Chance Play
Carter Handicap	3 & up	1/2 m.	Aqueduct	Apache	6	1:24	7,945	Blue Larkspur
Classic Stakes	3	1 1/4 m.	Wash. Pk.	Pot o' Luck	3	2:05	67,150	Colorado Kid
Coaching Club Am. Oaks	3	1 1/4 m.	Belmont Pk.	Elpis	3	2:18	15,215	Easton
Dixie Handicap	3 & up	1 1/4 m.	Pimlico	Rounders	6	1:56 1/2	25,400	Challenger II
Dwyer Stakes	3	1 1/4 m.	Aqueduct	Wildlife	3	2:05	38,835	Sickle
Empire City Stakes	3	1 1/4 m.	Jamaica	Gallorette	3	1:56	39,560	Reaping Reward
Futurity Stakes	2	6 1/2 f.	Belmont	Star Pilot	2	1:17	52,940	Annapolis
Gallant Fox Handicap	3	1 1/4 m.	Detroit	Crack Reward	3	1:12	3,250	Sickle
Grand Nat. St. Chase H'cap	4 & up	3 m.	Belmont	Mercator	6	5:48	15,005	Chance Play
Hollywood Gold Cup	3 & up	1 1/4 m.	Hollywood	Challenge Me	4	2:00	45,230	Sir Galahad III
Hopeful Stakes	2	6 1/2 f.	Belmont	Star Pilot	2	1:16	55,195	Royal Minstrel
Jockey Club Gold Cup	3 & up	2 m.	Belmont	Pot o' Luck	3	3:27	18,335	Stimulus
Kentucky Derby	3	1 1/4 m.	Churchill D'ns.	Hoop Jr.	3	2:07	64,850	St. Germans
Massachusetts Handicap	3 & up	1 1/4 m.	Suffolk D'ns.	First Fiddle	6	1:49	42,750	Bulldog
Matron Stakes	2	1/2 m.	Belmont	Beaugay	2	1:09	23,500	St. Germans
Metropolitan Handicap	3 & up	1 m.	Belmont	Devil Diver	6	1:36	18,280	Equestrian
Narragansett Special	3 & up	1 1/4 m.	Narragansett	Westminster	4	1:58	20,400	Bull Lea
New York Handicap	3 & up	2 1/2 m.	Belmont	Reply Paid	3	3:53	21,055	Unbreakable
Pimlico Cup Handicap	3 & up	2 1/2 m.	Pimlico	Stymie	4	4:35	21,600	Blenheim II
Pimlico Special	Wt. for age	1 1/4 m.	Pimlico	Armed	4	1:58	25,000	Mahmoud
Preakness Stakes	3	1 1/4 m.	Pimlico	Polynesians	3	1:58	66,170	Jean Valjean
Santa Anita Handicap	3 & up	1 1/4 m.	Santa Anita	Thumbs Up	6	2:01	82,925	Heliopolis
Saratoga Handicap	3 & up	1 1/4 m.	Belmont	Olympic Z'nth	4	2:02	37,105	Espino
Saratoga Special	2	1/2 m.	Belmont	Mist o' Gold	2	1:10	6,435	St. Germans
Selma Stakes	2	1 1/4 m.	Laurel	Athene	2	1:47	33,790	Reich Count
Stars & Stripes H'cap	3 & up	1 1/4 m.	Wash. Pk.	Devalue	7	1:51	40,000	Royal Minstrel
Suburban Handicap	3 & up	1 1/4 m.	Belmont	Devil Diver	6	2:04	34,995	Fight-Thirty
Travers Stakes	3	1 1/4 m.	Belmont	Adonis	3	2:02	28,680	Blue Larkspur
Trenton Handicap	3 & up	1 1/4 m.	Garden State	First Fiddle	6	1:50	45,500	War Admiral
Walden Stakes	2	1 1/4 m.	Pimlico	Colony Boy	2	1:50	23,450	Equestrian
Washington Park Fut.	2	1/2 m.	Wash. Pk.	Revoked	2	1:11	56,700	
Washington Park H'cap	3 & up	1 1/4 m.	Wash. Pk.	Busher	3	2:01	40,200	
Westchester Handicap	3 & up	1 1/4 m.	Jamaica	Stymie	4	1:56 1/2	38,765	

* Entrants must be 3 years old and fillies.

* Run at Belmont Park in 1945 because of transportation difficulties.

* Run at

STATE RACING STATISTICS

State	Days	States' Share	Handle	Attendance
Arizona*	26	\$110,000	\$2,750,000	75,000
Arkansas	30	355,284	5,895,881	125,000*
California	110*	8,258,569	162,394,493	2,500,000*
Delaware	30	1,051,187	28,099,170	352,538
Florida*	28	692,199	9,500,000	140,000
Illinois	222	4,250,815	108,060,010	2,456,926
Kentucky	75	179,687	23,405,309	562,000*
Louisiana*	30	225,000*	5,250,000	90,000
Maryland*	122	3,240,000	103,664,407	1,250,000
Massachusetts	78	2,608,351	63,511,767	1,200,000*
Michigan	82	1,883,644*	39,920,616	1,088,980
Nebraska*	30	40,000	3,500,000	120,000
New Hampshire	54	2,666,117	46,651,852	734,000*
New Jersey	50	3,422,433	83,944,418	918,047
New York	154	30,333,299	450,663,190	4,628,123
Ohio*	228	500,000	26,000,000*	900,000
Oregon*	11	28,000	900,000	27,000
Rhode Island	157	4,023,959	86,007,895	1,200,000*
Washington	83	730,622	14,612,449	285,000
West Virginia	116	161,066	13,816,574	300,000*

* Estimated. * Fiscal year. * Harness racing included. * State and city revenue.

NORTH AMERICAN RACING RECORDS

Dist.	Horse	Time	Age	Wt. (Jockey)	Track	Date
1/4 m.	Atoka	:33 1/2	6	105	Butte, Mont.	Sept. 17, 1906
1/2 m.	Double Call	:46	2	116	Tropical Pk.	March 12, 1940
3/4 m.	Pan Zareta	:57 1/2	5	120	Juarez, Mex.	Feb. 10, 1915
1 m.	Clang	1:09 1/2	3	110	Coney Island	Oct. 12, 1935
1 1/4 m.	High Resolve	1:22	4	122	Hollywood Pk.	Sept. 15, 1945
1 1/2 m.	Roseben	1:22	5	126	Belmont Pk.	Oct. 16, 1906
1 3/4 m.	Clang	1:22	3	105	Arlington Pk.	July 19, 1935
2 m.	Equipoise	1:34 1/2	4	128	Arlington Pk.	June 30, 1932
2 1/4 m.	South Dakota	1:40	3	122	River Downs	Aug. 4, 1945
2 1/2 m.	Top Row	1:42	3	109	Bay Meadows	Dec. 8, 1934
2 3/4 m.	Bull Reigh	1:42	5	121	Bay Meadows	Dec. 18, 1943
3 m.	Indian Broom	1:47 1/2	3	94	Tanforan	Apr. 11, 1936
3 1/4 m.	Whisk Broom II	2:00	6	139	Belmont Pk.	June 28, 1913
3 1/2 m.	Man o' War	2:14 1/2	3	126	Belmont Pk.	June 12, 1920
3 3/4 m.	Bolingbroke	2:27 1/2	5	115	Belmont Pk.	Sept. 26, 1942
4 m.	Man o' War	2:40	3	126	Belmont Pk.	Sept. 4, 1920
4 1/4 m.	Chilhowee	2:54 1/2	3	126	Latonia	Oct. 18, 1924
4 1/2 m.	Market Wise	3:20 1/2	3	114	Belmont Pk.	Sept. 27, 1941
4 3/4 m.	Fenelon	3:47	4	119	Belmont Pk.	Oct. 4, 1941
5 m.	Shot-Put	4:48 1/2	4	126	Washington Pk.	Aug. 14, 1940

CES OF 1945

Dam	Jockey	Wt.	Trainer	Owner	Date	Races
Gino Patty	T. Atkinson	110	W. Post	H. LaMontagne	Aug 16	Alabama Stakes
Stepinanna	G. Soutit	118	C. C. Norman	Murlogg Farm	Aug. 25	American Derby
Mata Hari	S. Brooks	122	J. C. Hodgins	Dixiana	July 28	Arlington Futurity
Baby League	J. Longden	113	G. M. Odom	L. B. Mayer	Aug. 4	Arlington Handicap
Late Date	A. Kirkland	119	T. Smith	Maine Chance Farm	Sept. 15	Beldame Handicap
Coquihoot	E. Arcaro	126	O. White	W. M. Jeffords	June 23	Belmont Stakes
Stop Watch	R. Permane	116	H. Jacobs	Mrs. E. D. Jacobs	July 4	Brooklyn Handicap
Stop Watch	R. Permane	121	H. Jacobs	Mrs. E. D. Jacobs	July 28	Butler Handicap
Flying Song	J. Stout	130	J. Fitzsimmons	Belair Stud	June 30	Carter Handicap
Potheen	D. Dodson	119	B. A. Jones	Calumet Farm	July 14	Classic Stakes
Faucille D'or	J. Adams	121	W. Booth	W. G. Helis	June 20	Coaching Club Am. Oaks
Short Run	F. Remers'd	118	W. Booth	W. G. Helis	June 16	Dixie Handicap
Invoke	T. Atkinson	116	A. Schuttinger	J. M. Roebeling	July 14	Dwyer Stakes
Gallotte	T. Atkinson	116	E. A. Christmas	W. L. Brann	July 21	Empire City Stakes
Floradora	A. Kirkland	126	T. Smith	Maine Chance Farm	Sept. 29	Futurity Stakes
Firecracker	H. Woodhouse	121	A. G. Wilson	T. D. Buhl	July 28	Gallant Fox Handicap
Ponoca	W. Owen	142	W. C. Jones	W. H. Lipscomb	Oct 3	Grand Nat. St. Chase H'cap
Cash Book	A. Skoronski	108	E. G. Porter	Brolite Farm	Oct 20	Hollywood Gold Cup
Floradora	A. Kirkland	112	T. Smith	Maine Chance Farm	Sept. 1	Hopeful Stakes
Potheen	D. Dodson	114	B. A. Jones	Calumet Farm	Sept. 27	Jockey Club Gold Cup
One Hour	E. Arcaro	126	I. H. Parke	F. W. Hooper	June 9	Kentucky Derby
Rueful	J. Longden	121	E. Mulrenan	Mrs. E. Mulrenan	Aug 11	Massachusetts Handicap
Risk	A. Kirkland	123	T. Smith	Maine Chance Farm	Sept. 22	Matron Stakes
Dabchick	T. Atkinson	129	J. M. Gauer	Greentree Stables	June 9	Metropolitan Handicap
Judy O'Grady	W. Garner	110	J. McGee	M. Wexler	Oct 6	Narragansett Special
Lady John	W. Mehrtens	105	C. Carroll	L. Rabinowitz	Oct 3	New York Handicap
Stop Watch	R. Permane	128	H. Jacobs	Mrs. E. Jacobs	Nov. 30	Pimlico Cup Handicap
Armful	D. Dodson	126	B. A. Jones	Calumet Farms	Nov. 17	Pimlico Special
Black Polly	W. Wright	126	M. H. Dickson	P. Widener	June 16	Preakness Stakes
Gas Bag	J. Longden	130	G. M. Odom	L. B. Mayer	June 30	Santa Anita Handicap
The Zenith	C. McCreary	108	W. Booth	W. G. Helis	Aug. 18	Saratoga Handicap
Patsie McKim	W. Wright	122	J. Healy	T. E. Bragg	Aug 18	Saratoga Special
Tophorn	W. Mehrtens	111	M. Hirsch	E. Lasker	Oct 13	Selma Stakes
Off Gold	S. Brooks	108	R. Saluno	Happy Hour Farm	July 21	Stars & Stripes H'cap
Dabchick	E. Arcaro	132	J. Gauer	Greentree Stables	June 16	Suburban Handicap
Crazy Jane	C. McCreary	110	W. Booth	W. G. Helis	Aug 11	Travers Stakes
Rueful	J. Longden	124	E. Mulrenan	Mrs. E. Mulrenan	Sept. 1	Trenton Handicap
Heritage	J. Gilbert	113	R. Waldron	Maine Chance Farm	Nov 30	Walden Stakes
Gala Belle	A. Bodiou	118	H. Wells	E. Asbury	Aug. 18	Washington Park Fut
Baby League	J. Longden	115	G. M. Odom	L. B. Mayer	Sept. 3	Washington Park H'cap
Stop Watch	R. Permane	125	H. Jacobs	Mrs. E. Jacobs	Nov. 3	Westchester Handicap

Washington Park. * Run at Jamaica Park.

and \$42,000 for a brown colt by Bimelech-Blinking Owl. At the Meadowbrook sales Mr. William Helis paid \$35,000 for a colt by Blue Larkspur-Gallant Lady.

The consistent high prices paid for young stock at 1945 auctions indicates the high stake and purse values of American races, especially those that have grown customary in New York State since the installation of the pari-mutuel system of betting in 1940. For instance, the 1948 Belmont Futurity prize has been set at \$50,000 and with the nomination list already reaching 1,621 unborn colts and fillies, the final value to the winner promises well to surpass \$100,000. This is the largest nomination list in 19 years for the Belmont classic.

HOCKEY

World (Stanley Cup)—Toronto Maple Leafs
National League—Montreal Canadiens.
American League—Cleveland Barons.
National Amateur—Seattle Ironmen.
Eastern League—Boston Olympics.
Metropolitan League—Jamaica Hawks.

HORSE SHOE PITCHING

National Horse Shoe Pitchers Association of America, 213 So. Everett St., Monterey Park, Cal.
National A.A.U. Singles—James Johnson, Ludlow, Ky.
National A.A.U. Doubles—Arner Lindquist and Charles Grosselin, Morgantown, W. Va.

HUNTING

National Retriever Champion—Black Magic of Andlon, owned by Mahlon D. Wallace, Jr.
National Field Trials—Ariel, owned by A. G. C. Sage.

ICE SKATING

Amateur Skating Union of the U. S.

Figure

Women's North American—Miss Barbara Ann Scott, Ottawa.
Women's National—Miss Gretchen Merrill, Boston.
National Pair—Jean Pierre Brunet and Miss Donna J. Pospisil, New York.
National Four—L. Vanderbosch, E. Vanderbosch, Miss Jackie Dunn and Miss Joan Yocum, Chicago.
National Dance—Robert Swenning and Mrs. K. M. Williams, New York.
National Junior—Richard Button, Philadelphia.
Women's National Junior—Miss Eileen Seigh, Philadelphia.

National Junior Pair—Lieut. Comdr. Lyman Wakefield and Miss Betty Higgins, Boston.

Speed

Men's Middle Atlantic—Herman Van Putten, Paterson, N. J.
Women's Middle Atlantic—Miss Marion Hanley, Staten Island.
Men's New York State—Herman Van Putten.
Women's New York State—Miss Marion Hanley.

LACROSSE

Intercollegiate (Wingate Trophy)—Army and Navy (tie)

PISTOL SHOOTING

25 Yards .22 Cal.—T/Sgt. H. L. Benner, at Bettendorf, Iowa, 200, slow fire, a record.
25 Yards .22 Cal.—T/Sgt. H. L. Benner, at Louisville, Ky., 200, timed fire, a record.
National Match Course, .45 Cal.—Harry Reeves
Women's .22 Cal. National Match—Gloria Jacobs
Women's .45 Cal. National Match—Eather Sichler

RIFLE SHOOTING

National Rifle Association of America, Scott Circle, Wash., D. C.

Records Set in 1945

100 Yards Smallbore—Walter Tomsen, at Allentown, Pa., 200—18X, 20 shots, metallic sights
50 Meter Smallbore—Ray Wilson, at Bethpage, N.Y., 200—18X, 20 shots, any sights
Women's 50 Meter Smallbore—Eleanor Dunn, at Bethpage, N.Y., 200—17X, 20 shots, any sights
Women's 50 Meter Smallbore—Mrs. Helen J. Wight, at Bethpage, N.Y., 200—17X, 20 shots, metallic sights
National Intercollegiate ROTC—U. of Pittsburgh
Wm. Randolph Hearst Trophy—Rice Institute

RODEO**Madison Square Garden**

Top Money Winner—Bill Linderman, Red Lodge, Mont., \$6065.
Bare Back Bronco Riding—Bud Linderman, Red Lodge, Mont.
Calf Roping—Toots Mansfield, Rankin, Tex., 12 Calves in 268½ seconds.
Steer Wrestling—Homer Pettigew, Springer, New Mex., 8 steer in 108½ seconds.

ROLLER SKATING, FIGURE

U.S. Amateur Roller Skating Assoc.,
120 West 42nd St., New York, N.Y.

Singles, Men—Walter Bickmeyer, Mineola, N.Y.
Singles, Women—Irene Maguire, New York, N.Y.
Pair—M. Holshauer and F. Salvage, Elizabeth, N.J.
Pair, Women—O. and S. Ludwig, Elizabeth, N.J.
Dance—R. Luginbuhl and F. Ludwig, Mineola, N.Y.

ROWING

Intercollegiate Rowing Association,
Hotel Biltmore, New York, N.Y.
Denmark Regatta—M.I.T.

SKIING

National Ski Association,
415 Lexington Ave., New York, N.Y.

Dartmouth Carnival

Men's Slalom—H. Hewitt, Dartmouth
Men's Jump—B. Sneath, Williams
Team—Middlebury

Middlebury Carnival

Men's Slalom—D. Gaylord, Middlebury
Men's Jump—P. Dunham, unattached
Men's Downhill—D. Gaylord
Women's Slalom—B. Shaw, Middlebury
Women's Downhill—R. Frazer, Middlebury
Team—Vermont

Lake Placid, N.Y.

Men's Open Downhill—B. Heggtveit, Ottawa, Can.
Men's College Downhill—W. Hovey, Middlebury
Men's Slalom—H. Hewitt, Dartmouth
Women's Downhill—R. Frazer, Middlebury
Women's Slalom—B. Shaw, Middlebury
Lake Placid 7 mi. X-country—J. Amyot, Voirie, Quebec

SOFTBALL

Amateur Softball Association
Sweetland Building, Cleveland, O.
World, Men's—Zollners, Fort Wayne, Ind.
World, Women's—Jax Maids, New Orleans, La.
National Jr.—Birmingham, Ala., Firemen

SQUASH RACQUETS

Gold Racquet Doubles—Hunter Lott and William Slack, Philadelphia.
Metropolitan Amateur Doubles—Clifford Sutter and J. Basil Maguire, Greenwich Country Club.
Metropolitan Combination League—Princeton Club

SOCCER

National Challenge Cup—Brookhattan, New York
Eastern Division, Brookhattan, New York
Western Division—Cleveland Americans
American League—Brookhattan, New York
Lewis Cup—Brookhattan, New York
Rowland Cup—British
National American—United German—American
National Intercollegiate—Navy
National Amateur Cup—Eintracht, Brooklyn, N.Y.
Eastern Amateur—Eintracht, Brooklyn, N.Y.
Western Amateur—Rafferties, St. Louis, Mo.
National Junior Cup—Schumachers, St. Louis, Mo.
Eastern Junior Cup—Pompei, Baltimore, Md.
Western Junior Cup—Schumachers, St. Louis, Mo.
New York State Cup—Eintracht, Brooklyn, N.Y.
Metropolitan Cup—Segura, Brooklyn, N.Y.
Metropolitan League—Cork Celtics, New York, N.Y.
P.S.A.L.—Lafayette High

SQUASH TENNIS

National Red Cross Tournament—Capt. Frank R. Hanson, Columbia University Club.

SWIMMING**Men's National Senior Outdoor Champions**

International Swimming Federation

100-Meter Free-Style—Alberto Isaacs, Mexico
200-Meter Free-Style—Keo Nakama, Ohio State.
400-Meter Free-Style—Keo Nakama.
800-Meter Free-Style—Jimmy McLane, Akron.
1,500-Meter Free-Style—Jimmy McLane.
100-Meter Back-Stroke—Robert Cowell, U. S. Naval Academy.
200-Meter Breast-Stroke—Dave Seibold, Michigan State College.
300-Meter Individual Medley—Dave Seibold.
300-Meter Medley Relay—Michigan State College A team.
800-Meter Free Style Relay—Great Lakes Naval.
Springboard Dive—Norman Sper, Hollywood, Calif.
Team—Michigan State.
Long Distance—Jimmy McLane.
Long Distance Team—Buffalo A. C.

Men's National Senior Indoor Champions

100-Yard Free-Style—Walter Ris, Bainbridge.
220-Yard Free-Style—Gene Rogers, Columbia.
440-Yard Free-Style—Keo Nakama, Ohio State.
150-Yard Back-Stroke—Adolph Kiefer, Bainbridge.
220-Yard Breast-Stroke—David Seibold, Saginaw, Mich.
300-Yard Medley—Adolph Kiefer.
300-Yard Medley Relay—Bainbridge.
400-Yard Free-Style Relay—Bainbridge.
Low-Board Diving—Ted Christakos, Ohio State
High-Board Diving—Frank McGuigan, San Francisco.
Team—Bainbridge. N.T.C., Md.

Women's National Outdoor Champions

100-Meter Free-Style—Miss Ann Curtis, San Francisco.
400-Meter Free-Style—Miss Ann Curtis.
800-Meter Free-Style—Miss Ann Curtis
1,500-Meter Free-Style—Miss Marilyn Sahner, San Francisco.
100-Meter Back-Stroke—Miss Marion Pontaco, San Francisco.
100-Meter Breast-Stroke—Miss Jeanne Wilson, Chicago
200-Meter Breast-Stroke—Miss Clara Lamore, Providence.
300-Meter Medley—Miss Joan Fogle, Indianapolis
300-Meter Medley Relay—Multnomah A. C.
800-Meter Relay—Crystal Plunge Club, San Francisco
Platform Dive—Mrs. H. C. Morgan, San Francisco
Springboard Dive—Mrs. H. C. Morgan.
Team—Crystal Plunge Club
3-Meter Springboard Dive—Helen C. Morgan
Long Distance, Ind.—Betty Lachok, Akron, O.
Long Distance, Team—Firestone Club, Akron, O.

Women's National Indoor Champions

100-Yard Free-Style—Miss Ann Curtis, San Francisco.
220-Yard Free-Style—Miss Ann Curtis
440-Yard Free-Style—Miss Ann Curtis
100-Yard Back-Stroke—Miss Marion Pontaco, San Francisco.
100-Yard Breast-Stroke—Miss Jeanne Wilson, Chicago
220-Yard Breast-Stroke—Miss Patricia Sinclair, New York.
300-Yard Medley—Miss Clara Lamore, Providence
800-Yard Medley Relay—Crystal Plunge, San Francisco
400-Yard Free-Style Relay—Crystal Plunge.
Low-Board Diving—Miss Zoe Ann Olsen, Oakland, Calif.
High-Board Diving—Miss Zoe Ann Olsen
Team—Crystal Plunge, San Francisco

National Collegiate A.A. Champions

50-Yard Free-Style—Mert Church, Michigan
100-Yard Free-Style—Mert Church
220-Yard Free-Style—Gene Rogers, Columbia
440-Yard Free-Style—Seymour Schlanger, Ohio State.
1,500-Meter Free-Style—Seymour Schlanger.
150-Yard Back-Stroke—Jim Shand, Princeton
200-Yard Breast-Stroke—Paul Murray, Cornell
Low-Board Diving—Hobart Billingsley, Ohio State.
High-Board Diving—Hobart Billingsley
800-Yard Medley Relay—Michigan.
400-Yard Free-Style Relay—Michigan
Team—Ohio State.

Other Team Champions

Eastern Intercollegiate League—Army.
Western Conference—Michigan.
P.S.A.L.—Brooklyn Technical High.

TABLE TENNIS

Men's Singles—Richard Miles, New York City.
Women's Singles—Miss Davida Hawthorn, New York City.
Men's Doubles—Cpl. John Somael, New York City, and Max Hersh, Detroit.
Women's Doubles—Miss Sally Green, Indianapolis, and Mrs. M. Shipman, Glen Ellyn, Ill.
Mixed Doubles—Don Lasater and Mrs. Dolores Kuenz, St. Louis.

TENNIS

National Lawn Tennis Association,
120 Broadway, New York, N.Y.

National Outdoor Champions

Men's Singles—Sgt. Frank A. Parker, Army Air Forces, Muroc Field, Calif.
Men's Doubles—William F. Talbert, Wilmington, Del., and Lieut. Gardner Mulloy, USNR.
Women's Singles—Mrs. Sarah Palfrey Cooke, Los Angeles.
Women's Doubles—Miss Louise Brough, Beverly Hills, Calif., and Miss Margaret Osborne, San Francisco.
Mixed Doubles—Miss Margaret Osborne and William F. Talbert.
Men's Clay Court Singles—William F. Talbert.
Men's Clay Court Doubles—Francisco Segura, Miami, Fla., and William F. Talbert.
Women's Clay Court Singles—Mrs. Cooke.

Women's Clay Court Doubles—Miss Pauline Betz, Los Angeles, and Miss Doris Hart, Miami, Fla.
 Mixed Clay Court Doubles—Elwood Cooke, Los Angeles, and Mrs. Sarah Palfrey Cooke.
 Intercollegiate Singles—Francisco Segura, Miami.
 Intercollegiate Doubles—Francisco Segura and Thomas Burke, University of Miami.

(Negro)

Men's Singles—L. Scott, Prairie View, Tex.
 Women's Singles—Mrs. K. Irvis, New York, N.Y.
 Men's Doubles—L. Scott and L. Graves, New York, N.Y.
 Women's Doubles—Mrs. R. and Mrs. M. Peters, Tuskegee, Ala.

National Indoor Champions

Women's Singles—Mrs. Helen Pedersen Rihbany, New York.
 Women's Doubles—Miss Katherine Winthrop, Hamilton, Mass., and Mrs. Virginia Rice Johnson, Brookline, Mass.
 Mixed Doubles—Mrs. Norma Taubele Barber, New York, and Robert Stewart, Boston.

National Interscholastic

Singles—Herbert Flam
 Doubles—Dean Mathey and F. B. Smith, Deerfield, Mass.

Professional Champions

World Hard Court—Bobby Riggs, Los Angeles
 National Singles—Welly Van Horn, Atlanta
 National Doubles—Bill Tilden, Philadelphia, and Vincent Richards, New York.

Veterans' Championship

Men's Singles—J. Gilbert Hall
 Men's Doubles—J. Gilbert Hall and Sidney Adelstein
 Women's Singles—Mrs. Gretl Dupont
 Women's Doubles—Mrs. Philip Theopold and Mrs. John B. Pierce

TRACK AND FIELD**Men's National Senior Outdoor Champions**

100-Meter Dash—Cpl. Barney Ewell, Camp Kilmer, N. J.
 200-Meter Dash—Elmore Harris, Shore A. C.
 400-Meter Run—Herbert McKenley, Boston.
 800-Meter Run—Robert Kelley, Illinois.
 1,500-Meter Run—Roland Sink, Harvard Middies
 5,000-Meter Run—John F. Kandi, New York A. C.
 10,000-Meter Run—Ted Vogel, Boston A. A.
 3,000-Meter Walk—Sam Bleifer, Maccabi A. C.
 3,000-Meter Steeplechase—James Wisner, Baltimore
 110-Meter High Hurdles—Charles Morgan, New Orleans.
 200-Meter Low Hurdles—Ronald Frazier, Los Angeles County Boys.
 400-Meter Hurdles—Dr. Arky Erwin, New Orleans.
 Shot-Put—Wilfred Bangert, Normandie, Mo.
 Hammer Throw—Henry Dreyer, New York A. C.
 56-Pound Weight Throw—Henry Dreyer
 High Jump—David D. Albritton, Dayton, Ohio; Sgt. Joshua Williamson, Camp Ross, Calif.; Richard N. Schnacke, Massena (N.Y.) A. A., and Lester Howe, Columbia Middies (tie).
 Broad Jump—Herbert Douglas, Pittsburgh.
 Hop, Step and Jump—Burton Cox, Villanova.
 Pole Vault—Lieut. Albert E. Morcom, U. S. Army, and Robert Phelps, Illinois.
 Discus Throw—John R. Donaldson, Rice Institute.
 Javelin Throw—Earl J. Marshall, U. S. Army.
 Team—New York Athletic Club.
 400-Meter Relay—Pioneer Club, New York.
 1,600-Meter Relay—Grand Street Boys.
 2,900-Meter Relay—Pioneer Club.
 Pentathlon—Eulace Peacock, Manhattan Beach C. G.
 Decathlon—Charles M. Beaudry, Marquette.
 15-Kilometer Run—John Kelley, West Acton, Mass.
 20-Kilometer Run—Charles A. Robbins, Brunswick, Me.
 25-Kilometer Run—Charles A. Robbins.
 80-Kilometer Run—Charles A. Robbins.
 Marathon—Charles A. Robbins.
 10-Kilometer Walk—James Wilson, Staten Island
 20-Kilometer Walk—Joseph Megyesy, N. Y. A. C.
 25-Kilometer Walk—William Mihaló, Detroit.
 80-Kilometer Walk—Morris Fleischer, Maccabi A. C.
 40-Kilometer Walk—William Mihaló.
 50-Kilometer Walk—John J. Abbate, Philadelphia.

Men's National Senior Indoor Champions

60-Yard Dash—Cpl. Barney Ewell, Camp Kilmer.
 60-Yard High Hurdles—Ed Dugger, Dayton, Ohio.
 60-Yard Low Hurdles—Max Minor, U. S. Military Academy.
 600-Yard Run—Elmore Harris, Shore A. C.
 1,000-Yard Run—Donald L. Burnham, U.S.N. Cornell Med.
 Mile Run—James Rafferty, New York A. C.
 Mile Walk—Joseph Megyesy, New York A. C.

Mile Relay—New York University.
 Two-Mile Relay—M. I. T.
 Three-Mile Run—Forest Efav, Oklahoma.
 Sprint Medley Relay—Navy.
 Shot-Put—Wilfred Bangert, Univ. of Missouri.
 35-Pound Weight Throw—Henry Dreyer, New York A. C.
 High Jump—Ken Wiesner, Marquette, and Sgt. Joshua Williamson, Camp Plauche, La. (tie).
 Broad Jump—Cpl. Barney Ewell.
 Pole Vault—William Moore, Western Michigan.
 Team—New York A. C.

Intercollegiate A.A.A.A. Outdoor Champions

100-Yard Dash—John B. Van Velzer, Navy.
 220-Yard Dash—John B. Van Velzer.
 440-Yard Run—William Whittington, Army.
 880-Yard Run—John B. Caskey, Navy.
 Mile Run—Rudy Simms, N. Y. U.
 Two-Mile Run—John F. Kandi, Cornell.
 Mile Relay—Navy.
 120-Yard High Hurdles—Clyde L. Scott, Navy
 220-Yard Low Hurdles—Jerry Morrow, Army
 Shot-Put—Ralph Davis, Army.
 Discus Throw—Gilbert J. Bouley, Cornell
 Javelin Throw—William D. Fetzner, Dartmouth.
 Hammer Throw—Leon Dombrowski, Army.
 Pole Vault—Philip Lansing, Army.
 Broad Jump—Frederic G. Bouwman, Navy.
 High Jump—Joseph F. Conley, Dartmouth.
 Team—Navy.

N.C.A.A. Outdoor Champions

100-Yard Dash—John Van B. Velzer, Navy.
 220-Yard Dash—Earl Collins, Texas.
 440-Yard Run—William Kash, Navy.
 880-Yard Run—Ross Hume, Michigan.
 Mile Run—Ross Hume.
 Two-Mile Run—Francis Martin, N. Y. U.
 120-Yard High Hurdles—George Walker, Illinois.
 220-Yard Low Hurdles—George Walker.
 Shot-Put—Edward Quirk, Missouri.
 Discus Throw—Wilfred Bangert, Missouri.
 Javelin Throw—William Patton, Navy.
 Pole Vault—Robert Phelps, Illinois.
 Broad Jump—Henry Aihara, Illinois
 High Jump—Fred Sheffield, Utah, and Kenneth Wiesner, Marquette (tie).
 Team—Navy.

Women's National Outdoor Champions

50-Meter Dash—Miss Alice Coachman, Tuskegee.
 100-Meter Dash—Miss Alice Coachman
 200-Meter Dash—Miss Stella Walsh, Cleveland.
 80-Meter Hurdles—Miss Lillian Purifoy, Tuskegee.
 400-Meter Relay—Laurel Ladies A. C., Toronto.
 High Jump—Miss Alice Coachman.
 Broad Jump—Miss Stella Walsh.
 Shot-Put—Frances Sobczak, Cleveland.
 Discus Throw—Frances Sobczak
 Baseball Throw—Marian Twining, Philadelphia.
 Javelin Throw—Miss Dorothy Dodson, Chicago.
 Team—Tuskegee Institute.

Other Team Champions

I. C. A. A. A. Indoor—Army.
 Western Conference Outdoor—Illinois.
 Western Conference Indoor—Michigan.
 Heptagonal Games—Navy.
 Metropolitan A. A. U. Outdoor—New York A. C.
 National A. A. U. Junior Outdoor—N. Y. A. C.
 P. S. A. L. Outdoor—Bayside High.
 C. H. S. A. A. Outdoor—Bishop Loughlin.
 Women's National Indoor—Tuskegee Institute.

Women's Indoor Track and Field

50-Yards—Alice Coachman, Tuskegee
 220-Yards—Stella Walsh, Cleveland, O.
 50-Yard Hurdles—Nancy Cooperthwaite, New York, N. Y.
 440-Yard Relay—Tuskegee
 High Jump—Alice Coachman
 Broad Jump—Clara Schroth, Phila., Pa.
 8-Pound Shot—Dorothy Dodson, Chicago, Ill.
 Basketball Throw—Marian Twining, Phila., Pa.
 Team—Tuskegee

National A.A.U. Interscholastic

H.S. Div. Team—Bishop Loughlin Memorial, Brooklyn, N.Y.
 Prep. Div.—The Hill School, Pottstown, Pa.

Heptagonal Games Association

Team—Navy
 X-ctry—Army

Intercollegiate A.A.A.A.

Indoor—Army
 Outdoor—Navy
 X-ctry—Army

National Collegiate A.A.

X-ctry—Drake
Individual—Fred Feller, Drake

Big Ten

X-ctry—Wisconsin
Individual—V. Twomey, Illinois

TRAPSHOOTING

Amateur Trapshooting Association,
Vandalia, Ohio

Grand American—Don Engleberry, Vermilion, Ohio
Women's Grand American—Mrs. Van Marker, Evanston, Ill.
North American—E. T. Pugh, Morris, Ill.
Women's North American—Mrs. Lela Hall, East Lynne, Mo.
National Doubles—H. L. Check and Rudy Etchen, Memphis, Tenn.
State Team—Illinois
Men's Champion—Vic Reinders, Waukesha, Wisc.
Women's Champion—Ruth Knuth, Indianapolis, Ind
Class AA—Julius Petty, England, Ark.
Class A—Bernie Judd, Hamilton, O.
Class C—A. R. Gentry, Chicago, Ill.
Class D—J. L. Kleeschulte, Wentzville, O

VOLLEYBALL

U. S. Volleyball Association

Pratt Trophy—North Avenue Larrabee Y.M.C.A., Chicago, Ill.
U.S.V.B.A., Men—Camden, N.J., Y.M.C.A.
U.S.V.B.A., Ind—Paul Merkh, 528 ½, Camden Y.M.C.A.
U.S.V.B.A., Women—Central Y.M.C.A., Phila., Pa.
U.S.V.B.A., Ind.—Maxine Sortwell, 439, Central Y.M.C.A., Phila., Pa.

WALKING**National A.A.U.**

10,000 meters—James Wilson, Staten Island, N.Y.
20,000 meters—Joseph Megysey, New York A.C., N.Y.
25,000 meters—William J. Mihaló, Detroit, Mich.
40,000 meters—William J. Mihaló
50,000 meters—John J. Abbate, Phila., Pa.

WEIGHT LIFTING**National A.A.U. Champions**

123-Pound—E. Ishikawa, York, Pa.
132-Pound—J. De Pietro, Circle Pool B. C.
148-Pound—Anthony Terlazzo, York, Pa.
165-Pound—J. B. Terpak, York, Pa.
181-Pound—H. Vinkins, U. S. Navy.
Heavyweight—H. G. Curtis, U. S. Navy.

WRESTLING**National A.A.U. Champions**

115-Pound—Ray Peninger, Tulsa.
121-Pound—Bill Klein, Tulsa.
128-Pound—Richard Dickenson, Tulsa.
135-Pound—Clifford McFarland, Blackwell, Okla.
145-Pound—Gale Mikles, Michigan State.
155-Pound—Doug Lee, Baltimore.
165-Pound—Dr. M. A. Northrup, San Francisco.
175-Pound—James Denehl, Corpus Christi (Tex.) Naval Air Training Base.
191-Pound—Robert Wilson, Corpus Christi (Tex.) Naval Air Training Base.
Heavyweight—Richard Vaughan, Lancaster, Pa.
Team—Oklahoma City Y. M. C. A.

Eastern Intercollegiate Champions

121-Pound—Malcolm MacDonald, Navy.
128-Pound—Robert Gershtoff, Coast Guard Acad.
136-Pound—Oscar Green, Navy.
145-Pound—Cornelius Lindholm, Lehigh.
155-Pound—Glenn Smith, Penn State.
165-Pound—John Hale, Navy.
175-Pound—Robert Land, Army.
Heavyweight—Joseph Stanowicz, Army.
Team—Navy.

Professional wrestling is not included because it has exceeded the bounds of a professional sport and engaged in vaudeville activities. There are no recognized authentic champions.

YACHTING

International, Star Class—United States (Marlin Burnham, San Diego, Calif.).
National, Lightning Class—George R. Barnes, Skaneateles, N. Y.
National, Comet Class—Joseph Bartlett, Margate City, N. J.
National, Atlantic Class—F. R. Ford, Scamp.
Atlantic Coast, Star Class—Southern Long Island Sound (Adrian Iselin 2d, Ace).

Corry Trophy, Star Class—Horace Havemeyer, Gull.
Intercollegiate—United States Coast Guard Academy (Philip Hildebrandt).
Thomas Lipton Cup—Harry Nye, Gale
World Star C—Malin Burnham
Port Huron—Mackinac Race—Detroit A.C., Blitsen
New York Y.C. Cup—Godfrey Higga, Blackbeard
National Dinghy—Ed Raymond, Zetom
Int. Jr. Dinghy Regatta—Royal Can Y.C.
George Owen Trophy—U.S. Coast Guard Academy
Boston Dinghy Cl Chall Cup—U.S.C.G.A.

Y. R. A. of Long Island Sound

International Class—Cornelius Shields, Aileen.
Class B—W. S. Chesley Jr., Auley.
Atlantic Class—G. R. Hinman, Sagola.
Star Class—W. P. O'Gorman, Wahini.
Victory—R. W. Fraser, Black Jack.
Handicap Class, Division V—Valkyrie, S. E. Kay.
Handicap Class, Division VI—Decibel, O. W. Reynolds.
Handicap Class, Division VII—Patricia, O. J. Bienstock.
One-Ten Class—H. G. Herbert, Hurricane.
Comet Class—W. E. Baltz, Blue Peter.

SHOW DOGS

Westminster Kennel Club, 22 East 60th St., New York, N.Y.

American Kennel Club, 221 Fourth Ave., New York, N.Y.

Westminster Kennel Club

Best in Show—Shieling's Signature, a Scottish Terrier owned by Mr. & Mrs. T. H. Sneathen.
Best in Sporting Group—Stockdale Town Talk, a black Cocker Spaniel, owned by C. B. Van Meter
Best in Hound Group—Marjan 11, a Saluki, owned by El Retiro Kennels.
Best in Working Group—Dictator v Glenhugel, a Doberman Pinscher, owned by Capt. B. Adamson
Best in Terrier Group—Shieling's Signature
Best in Toy Group—Udalia's Mei-Ling, a Pug, owned by D. F. Wagstaff.
Best in Non-Sporting Group—Blakeen Luzon, a Poodle, owned by Blakeen Kennels.

Westchester Kennel Club

Ch. Duvetyn of Stone Croft, a Doberman Pinscher, owned by F. F. H. Fleitmann

Kennel Club of Philadelphia

Ch. Oppidan of Etona, a smooth Fox Terrier, owned by John P. S. Harrison

Harbor Cities Kennel Club

Ch. Eric Again v.d. Daniels, a Dachshund, owned by Rivenrock Kennels

Skokie Valley Kennel Club

Honey's Lady a Great Dane, owned by R. A. Cavanaugh

Westbury Kennel Association

Ch. Tempo, a Pointer, owned by Ben J. Field

Camden Kennel Club

Ch. Ali Khyber, an Afghan Hound, owned by Mrs. L. P. McConaha

SHOW CATS**Empire Cat Club**

Daybreak, owned by Mrs. Mabel A. Lafayette

LIVESTOCK

Livestock breeding, although not strictly a sport in the active competitive meaning, has achieved such a degree of avocational and international public interest that it well exceeds horse and dog shows in popularity. Dozens of great livestock shows are held annually throughout the midwest. Although the interest in livestock shows parallels the spectator interest in horse shows, the great auctions are hinged to commercialism—a type of commercialism that involves a gamble. When a purchaser at an auction buys a single Hereford bull for an announced \$51,000 it is not for the purpose of owning a superb specimen of the breed. The purchaser is gambling that the bull will father ten or fifteen calves that will eventually return his money in sales. Sometimes, the bull proves to be an indifferent father.

Interest in livestock breeding and shows is weak along the eastern metropolitan areas, but grows much stronger as it advances towards the hinterland grazing areas and the midwestern cattle centers of Chicago, Kansas City, Denver and Fort Worth.

The average urbanite whose interest in livestock goes as far as cutting into a steak or pot roast can very little appreciate that prize cattle provoke as much interest as prize horses. Like horses, an appraisal of cattle takes into consideration not only performance and appearance, but also the purity and record of the antecedents. An indica-

tion of cattle values can be seen in the fact that one 2-year-old Hereford bull, Del Zento 1st, raised on W. D. Delaney, Jr.'s, Lazy D Ranch, Ada, Okla., sold for \$51,000 to George Rodens of Toronto on Jan. 5, 1946. Previously, the beef cattle record price stood at \$50,000, at which figure Dan Thornton, Gunnison, Colo., sold not one, but two Hereford bulls.

The largest Hereford sale was the Baca Grant Sale at Crestone, Colo., during September when 442 head sold for \$521,125 to buyers from 24 States and Canada. The high marks of the sale were the purchase of a 24-day-old bull calf for \$6,100 Gosmmer Brothers, La Veta, Colo.,—a world record for a calf so young—and the purchase of the herd sire, Baca E. Domino 33rd, by the Albert Noe Farms, Pulaski, Tenn., at the sale top of \$27,700.

The Wyoming Hereford Ranch in its 13th annual sale at Cheyenne early in October eclipsed all other sales with the highest average of \$4,371 for 64 head, 28 bulls averaging \$5,680 and 36 females averaging \$3,353. The price records that had stood for 13 years were broken by this 1945 edition of the WHR sale. At this auction, Dan Thornton purchased Helmsman 20th for \$27,500 and sold him a few weeks later for \$50,000.

The Greater Pan American Hereford Exposition in Dallas during November held the following winners:

Grand Champion Bull—MW Larry Domino 37th, owned by the Milky Way Hereford Ranch, Phoenix, Ariz.

Grand Champion Female—Martha Mischief J, owned by the Flat Top Ranch, Walnut Springs, Tex.

Grand Champion Steer—Tango, owned by Merlyn G. Kothman, Mason, Tex.

Top among 1945 auction sales of Shorthorn cattle was the 17-month-old bull, Edyllyn Royal Leader 21st, which was sold to Hal Williams, Madera, Cal., for \$7,000 by Thomas E. Wilson, Wilson, Ill., at the 1945 International Shorthorn Congress at Chicago.

An all-time Shorthorn sale record was established in December at the Chicago Market Fat Stock Show (war substitute for the International Livestock Exposition) where Tomahawk, exhibited by Carl Henkel, Mason City, Iowa, and Joe Deaux, Belmond, Iowa, sold at \$10 a pound for a total of \$11,100—a world high total for a single steer. At the show, Tomahawk was named grand champion over all breeds in competition with 1,640 steers, which comprised the largest show known in the 44-year history of the International.

Winners in other national Shorthorn shows were:

International Shorthorn Congress, Chicago

Grand Champion Bull—Edellyn Royal Leader 21st, exhibited by Thomas E. Wilson, Wilson, Ill.

Grand Champion Female—Lavender Supreme, exhibited by Elden McLachlan, Ewart, Mich.

Denver National Western

Grand Champion Bull—Edellyn Peerless Mercury, exhibited by Curtiss Candy Co., Dundee, Ill.

Grand Champion Female—Princess Susanna, exhibited by Sni-A-Bar Farms, Grain Valley, Mo.

Southwestern Fat Stock Show & Expo., Ft. Worth

Grand Champion Bull—Sni-A-Bar Control, exhibited by Sni-A-Bar Farms.

Grand Champion Female—Princess Susanna, exhibited by Sni-A-Bar Farms.

National Polled Shorthorn Congress, Memphis

Grand Champion Bull—Daybreak's Creed, exhibited by Albert Hultine & Sons, Saronville, Neb.

Grand Champion Bull—Daybreak's Creed, exhibited by Carl D. Cross, Rockford, Ohio.

The highest price ever paid for a Brown Swiss animal occurred at the Jane of Vernon National Sale at Waukesha, Wisc., on Labor Day when a six-months-old bull, The Laird of Lee's Hill, sold for \$10,500 to the Eastern Stephenson County Breeding Association, Lena, Ill.

The Laird's sire, Jane's Royal of Vernon, was first prize Sr. Get of Sire at the 1942 Waterloo Dairy Cattle Congress, the 1941 National Dairy Show and the 1941 Dairy Cattle Congress. He has thirty-eight daughters with Herd Improvement Registry records or Register of Production records, two of which have produced over one thousand pounds of butterfat in a year.

During 1945, 1,363 Brown Swiss animals sold for a total of \$476,817, or an average price of \$377.42 in 26 public sales. A new high was set at the Jane of Vernon National where 38 head went through the sale ring for an average of \$1,886.

Among the Guernsey breed, top sale of the year was Quail Roost Noble Primrose that brought \$17,000, being purchased by the Curtiss Candy Company of Chicago and consigned in the Quail Roost Sale by George W. Hill, Quail Roost Farms, Rougemont, N.C. This was the fourth highest price to be paid for any female at public auction. The second high female was Argilla Fair Palotterrie 8rd, purchased for \$14,000 by Fairlawn Farms, Inc., Port Chester, N.Y., from the Argilla Farm, Ipswich, Mass., at the Topsfield Sale.

Three Guernsey bulls reached the \$10,000 mark in 1945 auctions. Langwater Forward sold in the Rock Creek

Dispersal to Barger Brothers, Jefferson, Ohio, for \$15,000, making the sixth bull of the breed to bring that figure or more at public auction. Meadow Lodge King's Oklahoma, consigned by Kent B. Hayes, Meadow Lodge Farm, Oklahoma City, to the Indiana Sprung Sale, was sold for \$13,200 to Everett R. Beatty, Huntington, Ind. Quail Roost Rose Maxim, consigned by Fairlawn Farms, Inc., in the Quail Roost Sale was purchased for \$11,000 by W. M. Camp, Franklin, Va.

During the year, 8,348 Guernseys sold in 162 sales for \$8,375,513, for an average price per head of \$404.35, an increase of \$46.63 per head over the previous year. It was the highest average price paid for Guernseys since 1922.

In the year's sales, 134 Guernseys sold for \$2,000 or more. These sales offer an interesting aspect to the enormous prices paid for an individual head. Proof that an expensive investment very often produces dividends can be found in the sires related to the 134 consignments. Langwater King of the Meadows sired five that brought \$26,700; Blakelord Lord Jim sired four that sold for \$9,900; Quail Roost Rose Maxim four that sold for \$9,100 and Myhaven King four that sold for \$11,050. Three other bulls sired three each that included Riegeldale Melba's Emory, whose offspring brought \$10,050; Coronation King of Pine Manor, whose offspring sold for \$9,000 and Langwater Patrician, whose three progeny brought \$8,550.

The top 1945 price for Holsteins, a dairy breed, was \$21,000 paid by Hays, Ltd., Calgary, Alberta, for a female, Montvic Bonheur Pietje B, sold at the dispersal of the Bancroft Acres herd, Flint, Mich. In the same sale, Raymondale Ideal Successor sold for \$18,500, the year's highest male price. Successor is the sire of numerous proven and prepotent sons, four of which have sold for more than \$10,000 each.

At the Bancroft Acres sale a total of \$122,000 was realized from the sale of approximately 200 animals, making this one of the outstanding dispersal sales of the Holstein breed for all time.

Newly crowned "queen" for lifetime production of milk for the Holstein-Friesian breed, and as far as can be determined, for all dairy breeds in the world, is the 16-year-old Essex Suzune April Belle, owned by County of Essex, Cedar Grove, N.J., who has produced 248,183 pounds of milk and 8,358 pounds of butterfat.

At the end of the third quarter of 1945 available reports showed that 6,563 registered Holsteins sold at public auction for \$2,252,553, making an average of \$343.22 per head.

The highest selling Jersey was a \$10,500 bull, Orange Blossom Basileus, sold by the Orange Blossom Farm, Ontario, Cal., to E. K. Carey, McPherson, Kan. Of the year's 95 sales involving 4,432 head of Jersey in a transaction of \$1,171,120, the greatest was the Orange Blossom sale that saw 243 Jerseys sell for \$135,525. The annual A.J.C.C. President Cup went to Blossom May of Redmond who produced 18,604 pounds of milk and 1,072 pounds of fat, 2 x 365 days, for Ralph W. Keller of Redmond, Wash.

The top Aberdeen-Angus at auction in 1945 was a \$15,000 heifer sold by J. Garrett Tolcan, Pleasant Plains, Ill., and bought by Fowler McCormick, Glen Urquhart Farms, Barrington, Ill.

In the Ayrshire breed, highest auction price developed around an \$8,950 bull sold by Vista Grande Farms, Cropseyville, N.Y., to J. W. Alsop, Wood Ford Farm, Avon, Conn.

AVIATION

National Aeronautics Association, 1025 Connecticut Ave., Wash., D.C.

Like automobile and motor-boat racing, aviation races and records are a Twentieth-Century developed sports interest. While the older and more traditional sports pit man against man, or man against time and distance, aviation activities, in their civilian aspect, are primarily a test of man's mechanical ingenuity against the forces of time and distance. During the war years no aviation tournaments or shows were held.

Seattle to Wash., D.C.—6 hours, 8 min. by Army Boeing Stratoliner on January 10.

Montreal to London—13 hours, 34 min. by Royal Air Force Liberator on March 27.

Hawaii to Wash., D.C.—17 hours, 20 min. by B-29 Superfortress on September 2.

Wash., D.C. to Burbank, Cal.—8 hours, 39 min. by Lockheed Constellation on Sept. 9.

Guam to Wash., D.C. Non-stop—35 hours, 5 min. by B-29 Superfortress on Nov. 21.

Los Angeles to New York—5 hours, 28 min. by B-29 Superfortress on Dec. 16.

Long Beach, Cal. to New York—4 hours, 18 min. by Lockheed P-80, jet propelled, on Jan. 26, 1946, at an average speed of 584 m.p.h. and top speed of 660 m.p.h.

Altitude—44,980 feet, American record, by P-38 Lightning at Burbank, Cal. Record made April 30, 1943; announced July 20, 1945.

Speed—611 m.p.h. by Gloster Meteor jet plane at England on Nov. 8.

JOSEPH P. BLANK.

STABILIZATION ADMINISTRATOR, Office of. This office was established as the Office for Economic Stabilization within the Office of Emergency Management on October 3, 1942, by Executive Order 9250, to control as far as possible inflationary tendencies which would impede prosecution of the war and the operation of the domestic economy. The same order established the Economic Stabilization Board to advise the Director of the Office.

The Director was authorized to formulate and develop a comprehensive national economic policy for the control of civilian purchasing power, prices, rents, wages, salaries, profits, rationing, subsidies, and related matters.

The Stabilization program had the purpose of preventing avoidable increases in the cost of living, cooperating to minimize unnecessary migration of labor from one business, industry, or region to another, and facilitating the prosecution of the war. Executive Order 9328, of April 8, 1943, provided for regulations to stabilize the national economy by controlling price, wage, and salary increases. With the ending of the war, the program calls for control of both inflationary and deflationary tendencies which might impede the orderly transition to a peacetime economy.

Under Executive Order 9620, September 20, 1945, the Office of Economic Stabilization was abolished and all functions and authority were transferred to the Office of War Mobilization and Reconversion. Within the Office of War Mobilization and Reconversion was established the Office of Stabilization Administrator. The functions and authority of the Director of Economic Stabilization, transferred under Executive Order 9620 to the Director of the Office of War Mobilization and Reconversion, were delegated to the Stabilization Administrator.

JOHN CASKIE COLLET.

STATE, U.S. Department of. The Department of State continued in 1945 its manifold activities directed, in the field of foreign relations, toward the defeat of this country's enemies and the establishment of a secure and just peace.

The Department made a substantial contribution to the success of the United Nations Conference on International Organization which met at San Francisco from April 25 to June 26, 1945 and of the Inter-American Conference on Problems of War and Peace which met at Mexico City from Feb. 21 to Mar. 8. Officials participated in the Crimea and Berlin Conferences of the heads of government, and the London and Moscow meetings of the Council of Foreign Ministers.

James F. Byrnes took the oath of office as Secretary of State on July 3, succeeding Edward R. Stettinius, Jr., whose resignation was accepted by the President on June 27. Mr. Stettinius was appointed as Representative of the United States to the United Nations Organization. Dean Acheson replaced Joseph C. Grew as Under Secretary, and Benjamin V. Cohen was appointed Counselor in the Department. James C. Dunn and William L. Clayton continued as Assistant Secretaries of State, and Spruille Braden and William Benton replaced Nelson A. Rockefeller and Archibald MacLeish. Frank McCarthy replaced Julius C. Holmes but later resigned, and the vacancy thus created was filled by the transfer to that post of Donald S. Russell who had first been appointed as Assistant Secretary to fill the post left vacant by the promotion of Dean Acheson.

During the year many of the higher officers of the Department served on international and inter-

departmental commissions, committees, and boards concerned with the conduct of the war and the study of postwar problems. In the field of foreign relations the Department coordinated the many complex war activities of other agencies, and, in large part, it furnished the means of carrying out these activities so far as they required action in foreign countries by the Foreign Service of the United States. The Foreign Service offices necessarily became the headquarters or centers of American wartime activity in the countries with which the United States maintained diplomatic relations.

A number of Offices were created in the Department during the year to meet the expanding needs caused by the war situation and later by the termination of hostilities and the inclusion in the Department of certain functions performed by outside war agencies. On Apr. 1 the Office of the Foreign Service was expanded and reorganized. Subsequently an Interim International Information Service assumed many of the duties of the Office of War Information and the Office of Inter-American Affairs; an Interim Foreign Economic and Liquidation Service took over some of the functions of the Foreign Economic Administration and the Office of the Army-Navy Liquidation Commissioner; an Interim Research and Intelligence Service, under a Special Assistant to the Secretary, assumed a number of the responsibilities of the Office of Strategic Services.

The organization of the Department as of Dec. 15, 1945, consisted of the following offices, divisions, et cetera:

1. The Secretary of State, the Under Secretary of State, a Counselor, six Assistant Secretaries of State, a Legal Adviser, six Special Assistants to the Secretary, five Assistants to the Secretary, a Secretary's Staff Committee, a Coordinating Committee, and a Central Secretariat for these committees.

2. The Assistant Secretary for economic affairs administers five offices, namely, International Trade Policy, Financial and Development Policy, Transport and Communications Policy, Economic Security Policy, and Foreign Liquidation, with fourteen divisions which include: War Areas Economic Division, International Resources Division, Petroleum Division, Division of Commercial Policy, Division of International Labor, Social, and Health Affairs, Division of Financial Affairs, Division of Investment and Economic Development, Division of Lend-Lease and Surplus War Property Affairs, Aviation Division, Shipping Division, Telecommunications Division, Division of Economic Security Controls, Division of German and Austrian Economic Affairs, and Division of Japanese and Korean Economic Affairs.

3. The Assistant Secretary for European, Far Eastern, Near Eastern, and African affairs administers the Office of European Affairs, the Office of Far Eastern Affairs, and the Office of Near Eastern and African Affairs, and their component divisions which include: Division of British Commonwealth Affairs, Division of Eastern European Affairs, Division of Central European Affairs, Division of Southern European Affairs, Division of Northern European Affairs, Division of Western European Affairs, Division of Chinese Affairs, Division of Japanese Affairs, Division of Southeast Asian Affairs, Division of Philippine Affairs, Division of Near Eastern Affairs, Division of Middle Eastern Affairs, and Division of African Affairs.

4. The Assistant Secretary for administration is responsible for four offices, namely, Office of the Foreign Service, Office of Departmental Administration, Office of Controls, and Office of Budget

and Finance with twenty divisions, namely: Division of Foreign Service Planning, Division of Foreign Service Personnel, Division of Training Services, Division of Foreign Reporting Services, Division of Foreign Service Administration, Division of Foreign Buildings Operations, Division of Management Planning, Division of Departmental Personnel, Division of Central Services, Division of Cryptography, Division of Coordination and Review, Division of Protocol, Division of International Conferences, Division of Communications and Records, Passport Division, Visa Division, Special Projects Division, Division of Foreign Activity Correlation, Division of Budget, and Division of Finance.

5. The Assistant Secretary for public and cultural relations administers the Office of Public Affairs and the Office of International Information and Cultural Affairs with their six divisions, namely: Division of Public Liaison, Division of Research and Publication, Division of Geography and Cartography, Division of Cultural Cooperation, International Information Division, and Central Translating Division.

6. The Assistant Secretary for American Republic Affairs administers the Office of American Republic Affairs, which has six divisions, including: Division of Mexican Affairs, Division of Caribbean and Central American Affairs, Division of Brazilian Affairs, Division of River Plate Affairs, Division of North and West Coast Affairs, and Division of American Republics Analysis and Liaison.

7. The Assistant Secretary for Congressional relations bears responsibility in the field named. There is at present no incumbent to this post.

8. The Legal Adviser has responsibility for the legal affairs of the Department.

9. The Special Assistant to the Secretary for international organization and security affairs administers the Office of Special Political Affairs, which includes three divisions, namely: Division of International Organization Affairs, Division of International Security Affairs, and Division of Dependent Area Affairs.

E. WILDER SPAULDING.

STATE LEGISLATION. With one exception every state legislature met in 1945. Mississippi was the only State whose legislature did not convene during the year. Forty-four legislatures met in regular session and three other States held special sessions.

In the twenty-four States where there are no Constitutional limitations on the length of legislative sessions the tendency was for the legislatures to run somewhat longer than previous sessions held during the war period. This was true in at least fifteen States. The ending of the European War coming as it did in the middle of numerous legislative sessions may have been responsible for their continuing longer than usual. Obviously the termination of the European War was an incentive for the States to prepare for the returning veteran and for the period of reconversion and business uncertainty that many predicted would follow.

There was no diminution in the volume of legislation considered in 1945 for incomplete tabulations indicated that the number of new enactments would approximate 18,000, which is about the number of enactments during peacetime. The total number of bills introduced also will equal or exceed the usual average of 60,000 which are ordinarily brought to the attention of the legislatures in the years when most of them are in session.

Even more time than usual was given over to a consideration of financial problems due to the fact that many States were faced with the pleasant problem of what to do with large surpluses that

had accumulated due to increased revenues and decreased expenditures and payrolls. Almost without exception the States continued to follow the policy which they adopted at the beginning of the War, to assist in the anti-inflation program; namely, to reduce over-all debt, invest surpluses in war bonds, and reduce expenditures whenever possible. As a result of the state legislatures following such a policy, the States at the end of 1945 had reduced their over-all indebtedness by more than one-third; they had invested nearly \$6 billion in government war bonds, and had set aside over \$7 billion for unemployment compensation benefits. Budgets were balanced and there was not a State that did not have a substantial cash balance at the end of 1945.

War Legislation. Much attention was paid by the 1945 legislatures to the problem of caring for the veteran and a summary of veterans' legislation is included at a later place in this article. The program of suggested war legislation developed by the Department of Justice and various federal war agencies in cooperation with the Council of State Governments continued to receive favorable attention. The unanimity of action by the States in approving such war legislation set a record for enactment of uniform legislation in the nation's history.

These proposals included such matters as five Acts simplifying various legal processes relating to the protection of the armed forces and their property; the Airport Condemnation and Airport Zoning Acts having to do with the development of both wartime and civil aeronautics; legislation relating to Enrichment of White Bread and Flour and a Flour and Meal Container Act, both designed to place in state hands a control which had been established under federal emergency war powers; a Second Injury Fund Act, designed to facilitate the employment of returning disabled veterans and other handicapped persons; a Veterans' Service Officer Act, establishing in the State a mechanism for the dissemination to veterans of information as to rights and benefits; a Purchase of Federal Surpluses Act designed to aid the States and their political subdivisions in the purchase of federal surpluses and a State Plane Co-ordinates Act. These Acts received wide acceptance by both the 1944 and 1945 sessions.

The Flour and Meal Container Act was adopted in some 30 States; Enrichment of White Bread and Flour legislation adopted in 18 States; Second Injury Fund legislation, adopted in 32 States; State Plane Co-ordinate Systems Act in 19 States. Of the five proposals relating to the personal legal affairs of Servicemen, the Evidence of Death or Other Status of Missing Persons Act was adopted in 23 States; the Proof of Wills legislation was adopted in 28 States; Conservators for Missing Personnel Act, 17 States; Powers of Attorney, 29 States; and the Purchase of Federal Surpluses Act was adopted in 34 States. The Veterans' Service Officer legislation which was adopted in some 36 States is discussed in more detail in the section on veterans' legislation. Airport legislation was adopted in a large number of States and this legislation is discussed in more detail under aviation legislation.

Other major subjects which received attention during the 1945 sessions and which will be summarized here included aviation, labor, motor vehicles, public welfare, taxation and finance, uniform laws and interstate relations, and veterans.

Aviation. The fact that pending Congressional airport aid legislation requires state cooperation and that the Civil Aeronautics Administration has encouraged the States to aid in the development

and regulation of aviation led to the enactment of new or the recodification of existing aeronautical laws in more than thirty States. Aviation departments or commissions were established in nearly a dozen jurisdictions with the result that at the end of 1945, 44 States had agencies equipped to further the development of aviation and to participate in a federal aid airport program. Municipalities, by legislation, were authorized to own, construct or operate airports in Arkansas, Florida, Minnesota, Nebraska, Pennsylvania, and Washington. Under such legislation, cities generally would have authority to operate air navigation facilities and to issue bonds and levy taxes for the support of airports. A model airport condemnation proceeding was approved by six States and in addition eleven States approved a model airport zoning act which would give political subdivisions of a State power to prevent obstruction of public airport approaches by regulating the use of property near airports. The majority of the States now have such legislation.

Housing. Legislation authorizing municipalities to eliminate blighted areas and to assemble land, public housing or other city projects was enacted by Arkansas, California, Colorado, Connecticut, Florida, Illinois, Indiana, Minnesota, New York, Pennsylvania and Tennessee. The new California law permits cities to condemn blighted areas by eminent domain and to secure their rebuilding by private enterprise. Pennsylvania cities were authorized to create redevelopment authorities and to establish housing projects. In Minnesota the legislature provided for the eradication of slum areas through the formation of neighborhood redevelopment corporations. California, Georgia, Illinois, Nevada, New York, Pennsylvania, Tennessee, and Washington enacted housing legislation. Illinois and Pennsylvania authorized insurance companies to invest up to 10 percent of their assets in housing either by operation of housing projects or through loans to housing agencies.

Labor. Labor legislation in 1945 was noted for the number of restrictive bills that were introduced, despite the fact that few became law. As is customary in a subject as controversial as labor, numerous efforts were made to enact stringent regulatory legislation or to penalize the activities of labor unions in other ways. With very few exceptions, legislation of this type was killed in committee.

Restrictive bills abolishing the closed shop, providing for the strict regulation of unions and right-to-work proposals which were introduced in numerous States, particularly in the South and Southwest, were defeated. However, South Dakota approved a right-to-work amendment and provided for submission of such to a constitutional convention. Labor organizations have bitterly opposed such amendments which in the past have prevailed in Florida and Arkansas.

Legislation aimed at incorporating principles of the Federal Wagner Act were introduced in a number of States and a proposal of this type was finally enacted in Connecticut.

On the positive side from the standpoint of labor, practically all of the States enacted new or amendatory legislation increasing or broadening workmen's compensation. In Colorado, Pennsylvania and New York comprehensive revisions and improvements were made in workmen's compensation laws.

Many constructive improvements were made in numerous health and safety statutes affecting labor, particularly those covering such hazardous occupations as mining and transportation. Bills establish-

ing separate departments of labor or industry were considered in Arizona and Indiana while Montana authorized consideration of a constitutional amendment for this purpose at the next election. The establishment of a division of migrant labor in the Department of Labor was approved in New Jersey. Standards for the regulation of such camps were set up in New Jersey and Utah.

A new arbitration service was established in North Carolina and a division of industrial hygiene was created in Tennessee. Minimum wage and hour laws were considered in many States and improved in several. Child labor standards were raised in Illinois, Maine, and Rhode Island. A proposal was approved in Minnesota outlawing strikes, boycotts, or picketing during the certification period of a collective bargaining agency. A highly controversial "full employment" bill modeled on the federal proposal was defeated in California.

Study commissions were created in Michigan to study child labor conditions; in Alabama to revise its building code; and New York continued its Joint Legislative Committee on Industrial and Labor Conditions with a \$90,000 appropriation. An appropriation of \$200,000 was made by New York to its new School of Industrial and Labor Relations at Cornell University.

Motor Vehicles. During the War, the States rigidly adhered to the Governors' War Emergency standards governing the weight and dimensions of motor trucks traveling in interstate commerce. Reciprocity in regard to motor vehicle license plates and registration fees for war workers was also extended generally by the States. As a result, so-called interstate trade barriers in the motor transport field, particularly those obstructing the movement of war goods across state lines, were eliminated among the States. Wishing to continue these gains many state legislatures, stimulated by the motor carrier industry, increased size and weight limitations and extended reciprocal agreements applying to fees and taxes to other States. At least thirty-four States considered amendments to existing size and weight limitations. Arizona, California, Colorado, Delaware, Florida, Illinois, Iowa, Nebraska, North Carolina, North Dakota, New Hampshire, New York, Oregon, South Carolina, Tennessee, Texas, Vermont, Washington, Wisconsin, and Wyoming were among the States which generously increased or liberalized size and weight limitations or permit regulations covering motor trucks.

On the reciprocity front Arkansas, Indiana, Minnesota and South Carolina extended reciprocal favors to passenger vehicles for hire from other States and Wisconsin to war workers and members of the Armed Forces.

Legislation relating to motor vehicle registration was enacted in twenty-four States. Most of them increased present fees or required registration for such vehicles as station wagons, house trailers, cranes, and other "outsized" vehicles.

Almost every legislature in session in 1945 enacted measures for the regulation of carriers. Most of these acts were minor amendments of little general interest applying to such matters as ages of drivers, smoking in vehicles, regulation of taxicabs and truck rates. Minnesota established an interim committee to study truck rates and regulations and South Carolina authorized its Public Utilities Commission to appear in proceedings concerning railroad abandonments and extensions.

Motor vehicle safety responsibility acts were enacted in Georgia, Minnesota, Nebraska, and Pennsylvania and amendments to existing responsibility laws were put through in California, Indiana,

Maine, Maryland, New Hampshire, Oregon, and Wisconsin.

Laws providing for the licensing and regulation of dealers were put on the statute books of several States. On the Constitutional amendment front, Indiana, Maryland, Pennsylvania, Tennessee, and Texas passed measures referring amendments to the people prohibiting the diversion of highway user revenues to other purposes. Pennsylvania's amendment came up in 1945; Maryland and Texas will vote in 1946; and Indiana and Tennessee must be approved by their 1947 legislatures before they can be referred to the voters. Six States: Florida, New Jersey, Oklahoma, Pennsylvania, Washington, and Wisconsin enacted legislation making possible the diversion of highway revenues to other purposes.

Planning. Planning legislation was enacted by 14 States during the 1945 session. Arkansas, Minnesota, South Carolina, Rhode Island, Vermont, and Washington created State development and planning agencies. New York provided for the construction of erosion arresting structures on the Atlantic coast and enacted measures to assist the State and its localities to finance public works and highway plans and projects. Similar measures assisting local public works planning were enacted in California, Illinois, Indiana, Maryland, Michigan, New Jersey, Pennsylvania, and Washington. At the end of 1945 every State had set up some type of agency to handle postwar planning and reconversion problems.

A large volume of legislation affecting highway construction and enabling the States to participate in the Federal Aid Highway act of 1944 was also enacted during the year.

Public Welfare Legislation. Welfare legislation enacted in 1945 was aimed principally at preparing the States for the reconversion period and for social problems that might arise in the postwar years. As a result, a number of welfare administrations were reorganized and improved. New York, Illinois, Indiana, and Missouri were in the forefront of the States that acted on the welfare front.

As a result of Governor Thomas E. Dewey's Interdepartmental Committee on Delinquency, eight bills were enacted by the New York Legislature covering such subjects as the prevention of delinquency, increased state facilities for the care of delinquents, and a greater flexibility in the use of State institutions in treating young offenders. In addition, the Temporary State Commission on Medical Care was continued and the Special Committee on Social Welfare of the New York Joint Legislative Committee on Interstate Cooperation (the Ostertag Committee) carried on its comprehensive study of administration of social services in the State and made major recommendations for integrating welfare services at the local and county level of government.

Over 160 social welfare laws were enacted in Illinois with the result that many improvements were made in the statutes covering child welfare, care of the sick, public aid, and the school program. Indiana completely reorganized and strengthened its welfare structure and the Missouri Legislature gave its attention to putting into effect welfare changes authorized by the Constitutional Convention in that State whose work was approved by the voters in November. Vermont created a policy determining board to the Department of Welfare and Wisconsin, in addition to recodifying its public assistance laws, also integrated welfare services previously handled by private agencies with the county welfare departments.

Special studies of problems of old age assistance were authorized in Ohio and Illinois. Old age assistance was increased in Delaware, North Carolina, South Dakota, Utah, Vermont, Washington, and Wyoming and ceilings or limitations on the amount recipients may earn or receive were lifted in many States. At the same time, aid to dependent children programs were lifted in many States. In addition, aid to dependent children programs were broadened and increased in Iowa, Maryland, Minnesota, Nebraska, and New York.

A number of States modified restrictive residence or settlement requirements for public aid with Pennsylvania eliminating settlement restrictions entirely on a reciprocal basis with other States.

Child welfare study commissions of one kind or another were initiated in Connecticut, Kansas, Missouri, Oregon, and Washington.

A State Youth Commission was established in New York with authority to help finance aid to municipalities for their youth guidance activities. The Connecticut and Oregon investigations will also give particular attention to developing programs for the prevention of juvenile delinquency. North Carolina authorized the establishment of juvenile courts in cities of 10,000 or more.

Other States that enacted legislation pertaining to the improved care of delinquents and the prevention of delinquency were, in addition to those mentioned: Alabama, Indiana, Minnesota, Montana, Oregon, and Wisconsin.

Health and Medical Care. Approximately thirty States by legislative action or governor's order initiated state-wide studies of hospital needs. Model legislation sponsored by the Council of State Governments was responsible for the comprehensive surveys carried on by some twenty States. As a result of such action the majority of the States will be prepared for participation in the nation-wide hospital construction program which is to be financed on a federal-state grants-in-aid basis.

In addition, Maryland initiated a program of medical care for the indigent in the State, while Michigan provided clinics and hospitals for the care of indigents in certain counties. A state medical center to be administered by the State University was established in North Dakota, and special steps were taken to extend medical care to the poor and chronically ill in Illinois, North Carolina, and North Dakota. A proposed over-all state health insurance plan failed to pass in California although, as a result of legislation enacted in 1945, thirty-three States have enacted legislation governing non-profit hospital plans. Special efforts to care for the mentally-ill were taken in Minnesota, North Carolina, Ohio, Vermont and Wisconsin where added facilities were provided.

On the recreational side, North Carolina was the first State to set up a special recreation commission. In addition, fourteen States by legislation established regional planning machinery having to do with physical construction and the conservation of natural resources in their respective areas.

Unemployment Compensation. To prepare for post-war unemployment, to relieve hardship and to correct existing deficiencies, many of the States improved their unemployment compensation systems in 1945. Twenty-five States increased maximum insurance benefits and twenty-eight lengthened maximum duration of benefits. Maryland eliminated the waiting period between job dismissal and benefit payments and six other States reduced their waiting period. A third of the States extended coverage to persons working for an employer of one or more.

At the end of the legislative year the States had so amended their unemployment compensation systems that:

(1) weekly benefit maximums of \$20 or more could be paid in twenty-seven States in which approximately 78 percent of covered workers were employed;

(2) maximum benefit duration of twenty or more weeks prevail in thirty-three States in which 80 percent of all covered workers are employed.

Fair Employment Practice Acts. Fair employment practice acts modeled on the proposed Congressional act were adopted in Indiana, New Jersey, New York, and Wisconsin. Similar legislation was considered by sixteen other States but failed of enactment.

Taxation.* Relatively little comprehensive tax legislation was enacted in 1945. In general the legislatures, when they imposed taxes, levied the "painless" variety that is on such commodities as liquor, cigarettes and gasoline. Higher liquor taxes were put on in ten States: Alabama, Arkansas, Florida, Indiana, Massachusetts, Michigan, North Carolina, South Carolina, Utah, and Vermont. Oklahoma, a dry state, raised the tax on non-intoxicating beverages from \$2 per barrel to \$7 per barrel. Beer taxes were increased in Alabama, Florida, Indiana, Nevada, North Carolina, South Carolina and Utah. Increases ranged from $\frac{1}{2}$ cent on each 12 fluid ounces in Alabama to 4 cents per pint in Florida. Additional wine taxes were imposed by Florida, Indiana, Massachusetts, Michigan, Nevada, and North Carolina, while Arkansas, Florida, Massachusetts, Michigan, Nevada, and Vermont increased taxes on spirituous liquor. The 10 percent emergency state tax on liquor was extended in Pennsylvania until June 1, 1947; the \$1.50 per gallon additional liquor tax in New York was extended to March 31, 1946, and the temporary additional excise on alcoholic beverages was continued in Massachusetts until June 30, 1947. License requirements were made more stringent in California, North Carolina, and South Carolina and fees were also increased in the latter State.

The tax on cigarettes was extended in Massachusetts, New York, Ohio, Pennsylvania and Wisconsin. Increases were put on in Alabama, Connecticut, Massachusetts and new laws imposing 2 cents and 4 cents per package respectively were enacted in Idaho and Florida. Maine put a \$1 license fee on sub-jobbers and Wisconsin made its use tax applicable to tobacco.

Gasoline. Emergency wartime rates were continued in Florida, Massachusetts, New York, Ohio, Pennsylvania and West Virginia. By reason of a 2 cents per gallon increase, Oklahoma, with an over-all tax of 7 $\frac{1}{2}$ cents assesses the highest gas tax in the country. One cent a gallon increases were put through in Idaho, Iowa and Kansas. Numerous technical changes relating to exemptions, refunds and administration were made in Connecticut, Delaware, Florida, Georgia, Indiana, Maine, Maryland, Minnesota, Montana, Ohio, Oregon, South Carolina, South Dakota, Utah, and Wyoming.

An aviation gas tax of 4 cents per gallon with certain refunds for large purchasers (airlines) was enacted in Alabama, Minnesota, Oklahoma, Nebraska, Pennsylvania, and Wisconsin.

Numerous changes in other classes of taxes were made during the year. The following paragraphs

summarize the more important enactments under their different classifications:

Income. The outstanding change in income tax legislation was New York's 25 percent reduction in the personal income and net capital gains taxes. California also effected reductions by increasing the exemptions for personal income tax from \$2,000 to \$3,000 for single persons and from \$3,500 to \$4,500 for married persons. The legislature also extended the 15 percent credit on the amount of taxes to be paid to taxable years beginning before January 1, 1947, on personal income and corporation income taxes. Corporation income taxes were also reduced. Iowa, by providing "that 50 percent of the tax imposed on individual income shall be credited to the taxpayer and 50 percent shall be accepted in full liability for the tax due for the years 1944 and 1945, payable in the years 1945 and 1946 respectively."

Amendments of various kinds were made in state income tax laws in order to bring about substantial conformity with the federal income tax law. Other amendments aimed at correcting inequities in existing law and providing for administrative changes were adopted in Alabama, California, Colorado, Connecticut, Delaware, Kansas, Maryland, Massachusetts, Minnesota, New York, North Carolina, North Dakota, Oregon, Pennsylvania, and Wisconsin.

Changes in the definition of "resident" were made in Delaware and amendments relating to payment of taxes by non-residents on income earned within the State as well as credit for taxes paid to another State were made in Massachusetts, New York, and Vermont.

As in recent years a number of States continued the practice of exempting from taxation the service, mustering-out, and allotment pay of those in the Armed Services.

Sales Taxes. Alabama broadened the base of its use tax to include tangible personal property purchased for use within the State. Colorado discontinued the use of tax tokens and abolished its controversial service tax which licensed and taxed many business occupations. All emergency sales and use taxes were extended for New York City by the legislature in that State and Indiana reorganized its Gross Income Tax Division as well as broadened its law. The North Dakota sales tax law was also rewritten. Minor changes in definition and administrative practices were made by most of the twenty-five States which levy a general sales tax and whose legislatures met in 1945.

Miscellaneous Taxes. As in the case of other taxes, emergency rates on utilities were extended by Massachusetts, New York, Ohio, Pennsylvania, and Rhode Island and property taxes on airlines were enacted in Minnesota and Wisconsin. Numerous technical amendments were made in the field of property tax legislation, but none were of national significance. Modifications in the tax rates on stock transfers were made in Pennsylvania and New York and the additional emergency tax was repealed in the latter State. A tax of 2 cents per share was enacted with certain exceptions. A new severance tax on timber and forest products was enacted in Alabama. An Oil and Gas Conservation Commission was created in Georgia and a Board of Conservation in Florida.

Insurance Taxation and Regulation. The Supreme Court's decision in the Southeastern Underwriters case holding that the insurance business is commerce and that that part of it which is conducted across state lines is interstate commerce and thus subject to federal statutes, led many States to

* For more detailed information see excellent tabulation in *Taxes* published by the Commerce Clearing House of Chicago.

amend their insurance codes in order to eliminate discriminatory taxes and retaliatory provisions of one kind and another against companies in other States. The enactment of Public Law 15 by Congress in March, 1945, following the Supreme Court decision gave the States until January 1, 1948, to put their insurance statutes in order, particularly those laws which violated federal anti-trust and fair trade practice acts. This double-barrelled action on the part of the federal government to eliminate abuses in the insurance business itself and to improve state regulatory controls resulted in nearly thirty States' either changing their insurance tax provisions, rewriting their insurance codes, or establishing interim commissions to study the problem in preparation for the legislative sessions of 1947. Tax changes, which were usually in the direction of removing retaliation features of present law or of equalizing taxes between foreign and domestic companies, were enacted in Alabama, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Iowa, Maine, Maryland, Massachusetts, Missouri, New Hampshire, New Jersey, New Mexico, North Carolina, Oklahoma, Oregon, South Dakota, Tennessee, Texas, Washington, and West Virginia. Approximately a dozen States created interim study commissions to investigate the subject.

Veterans. As a result of legislation passed in 1945 every State has a veterans' service agency. In many instances, the States enacted legislation similar to the "State Veterans' Service Officer Act" contained in the program of suggested war legislation of the Drafting Committee of the Council of State Governments. States that established new departments or reorganized existing ones in 1945 were Alabama, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Kansas, Maryland, Massachusetts, Montana, Nebraska, New York, North Carolina, North Dakota, Oklahoma, Oregon, Rhode Island, Tennessee, Vermont, Washington, West Virginia, and Wisconsin. Many other States took such action in their 1943 or 1944 sessions. In general, the veterans' agencies serve as informational clearinghouses for veterans and their families. Veterans are kept advised of the existence or availability of (1) educational facilities, (2) health, medical, rehabilitation and housing facilities and services, (3) employment and reemployment services, (4) provisions of federal, state, and local laws of benefit to veterans and their families. In addition, the state agencies (1) assist veterans and their families and dependents in the presentation, proof and establishment of such claims and other benefits as they may have under law, and (2) cooperate with all governmental and private agencies in securing services or any benefits to veterans and their families.

In numerous States far more extensive services are offered the veteran. Appropriations for the operation of such departments run from an average of approximately \$20,000 in the smaller States to \$2,800,000 annually in Illinois and New York. Among the larger general appropriations was that of Michigan which set aside a \$50,000,000 postwar reserve fund for benefit of returning servicemen, their widows and dependents. New Hampshire made a general appropriation of \$4,000,000 to pay a bonus to soldiers of World War II. Other States authorizing a bonus payment for World War II were Massachusetts and Missouri. New Hampshire in 1943 and Vermont in 1942 had previously approved bonuses. After World War I, twenty-one States provided bonuses. In the larger

States, field staffs and district offices have generally been established.

Every legislature convening in 1945 amended existing law or put through new acts providing rights, benefits and privileges to veterans, servicemen, their dependents and their organizations. The principal purpose of the new legislation had to do with the rehabilitation of veterans of World War II. Legislation to amend prior laws covers such matters as (1) service to veterans in prosecuting their claims against the federal government, (2) hospital and domiciliary care in state institutions, (3) economic grants for relief, (4) employment preferences and preservation of job rights, (5) land settlement benefits, (6) occupational and tax exemptions. New legislation included such subjects as (1) bonuses, (2) educational grants to supplement federal aid where need was apparent, (3) additional educational opportunities and training courses in state institutions, (4) loans for rehabilitation, education or for the purchase of homes, farms, or business.

Uniform Laws and Interstate Relations. When the Oklahoma legislature ratified the Interstate Parole and Probation Compact in 1945 it became the thirty-ninth State to approve this highly successful legal and administrative device for the interchange of parolees and probationers among the States.

The Connecticut and Florida legislatures ratified the Atlantic States Marine Fisheries Compact during the year with the result that fourteen States, all but North Carolina, along the Atlantic seaboard are participating in the program of the commission. As a part of its work model legislation providing for uniform regulations with respect to various species of fish was approved by the different States along the Atlantic Coast in 1945. As a result of the activities of the commission, long-standing confusion and a conflict in the laws governing fishing regulations of the States bordering on the Atlantic have been alleviated.

The development of uniform legislation and interstate cooperation advanced on the conservation and pollution abatement front with the ratification by the Pennsylvania legislature of both the Potomac River Basin Compact and the Ohio River Valley Sanitation Compact. In ratifying the Potomac Compact, Pennsylvania joins with Maryland, Virginia, West Virginia, and the District of Columbia in controlling pollution and developing the water resources of the Potomac River. Pennsylvania also joins with Illinois, Indiana, New York, Ohio, Tennessee, and West Virginia in the Ohio River Compact.

In 1945, a total of 83 Uniform and Model Acts were introduced and 45 were adopted in 1945 as compared with 162 introduced—80 enacted in 1943, and 201 introduced—80 enacted in 1941. These uniform acts were developed by the National Conference of Commissioners on Uniform State Laws and by the Council of State Governments. During the fifty-three years of its existence the Uniform Law Commissioners have drafted and approved nearly 100 uniform proposals and today some fifty uniform acts are currently being recommended to the state legislatures.

Among those uniform acts which received favorable attention in 1945 were the Uniform Veterans' Guardianship Act and the Stock Transfer Act which were approved by four States and the Trusts Receipts Act and the Acknowledgment Amendment Act were approved by three States.

Conclusion. With the European War ending during the middle of many of the legislative sessions,

a considerable number of States requested Attorneys General or special committees to study the problem of when emergency war legislation should be terminated. Legislation which did not terminate with the cessation of hostilities will probably be ended by executive order or legislative resolution soon after the convening of the 1946 and 1947 sessions.

At least three or four thousand bills having to do with veterans' problems were introduced at the 1945 sessions. In addition, a number of special sessions were held to consider veterans problems. There is no doubt that legislative sessions for many years to come will devote a considerable portion of their time to veterans' affairs if we are to judge from the pace set by the 1945 sessions. Emergency war legislation which occupied a large part of the time of the legislators from 1941 to 1945 will cease to be of importance to the legislators who will be more concerned with peacetime and routine matters such as taxation and finance, housing, education, motor vehicles, law enforcement, and public welfare. By and large the record made by the States during the wartime years was an auspicious one and by comparison much better than that made during World War I. In other words, the quality of individual legislators continues to improve as does their over-all product if we judge by the accomplishments of 1945.

HUBERT R. GALLAGHER.

STATES OF THE U.S. Additional information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles: AGRICULTURE, MARRIAGE STATISTICS, MINERAL PRODUCTION, ROADS AND STREETS, SCHOOLS, SOCIAL SECURITY BOARD, TAXATION, UNIVERSITIES, VITAL STATISTICS, ELECTIONS, U.S., REPRESENTATIVES AND SENATE, AND STATE LEGISLATION. (See table on page 591.)

SUEZ CANAL. A sea-level canal across the Isthmus of Suez, connecting the Mediterranean and the Red Sea. Operated by the French-controlled Suez Canal Company, which holds a concession (expires Nov. 17, 1968) from the Egyptian Government, the canal is normally the main route between maritime Europe and the ports of the Indian and western Pacific oceans.

Cargo traffic on the canal declined from the peak of 36,129,101 net registered tons carried by ships in the calendar year 1937 to 13,092,615 tons carried in 1940, 8,263,000 tons in 1941 and 7,028,000 tons in 1942. The traffic for 1945 was expected to reach nearly 75 percent of the average annual prewar traffic.

SVALBARD. An arctic Archipelago (10° to 35° E. and 74° to 81° N.) owned by Norway. The principal islands are West Spitsbergen (or Mainland), North East Land, Prince Charles Foreland, Edge Island, Barents Land, King Karl's Land, Hope Island, and Bear Island (69 sq. mi.). Total area, 24,294 square miles. Population on Jan 1, 1940, about 1,000. Green Harbor (capital), New Aalesund, Coles Bay, Longyearbyen, and Braganza Bay were the main settlements, all on the western coast of West Spitsbergen. Coal was the chief product (627,000 metric tons in 1938 and 400,000 in 1940). Iron, asbestos, and gypsum exist. Most of the inhabitants were evacuated during September, 1941. The archipelago commands the route over which Allied war supplies were sent to the Russian port of Murmansk during World War II.

SWEDEN. A constitutional monarchy of Scandinavia. Sovereign, Gustav V, who succeeded to the throne on Dec. 8, 1907. Area, 173,398 square miles. The estimated population on Jan. 1, 1945, was 6,597,348 (6,250,500 at the 1935 census). Vital statistics (rate per 1,000) for 1943: births 19.3, deaths 10.1, marriages 9.5, infant mortality 29. Chief cities (with estimated population figures for 1944): Stockholm (capital) 635,534, Göteborg 290,486, Malmö 163,213, Norrköping 73,353, Hålsingborg 64,087.

Education and Religion. Education in the public elementary schools is free and compulsory. Children not attending schools under government supervision must furnish proof of having been privately educated. In 1941 the elementary schools had 538,304 students. The 214 secondary schools, in 1943, had a total 66,313 students; in addition there were military, navigation, agriculture, veterinary, and other special schools. In 1943 the universities at Göteborg, Lund, Stockholm, and Uppsala had a total of 8,525 students enrolled. The majority (90 percent) of the population adhere to the Lutheran Protestant Church. Protestant Dissenters, Roman Catholics, Jews, and some others make up the minority.

Foreign Trade. In 1945 Sweden's imports were valued at 1,087,000,000 kronor (1,664,400,000 kronor in 1944); exports, 1,724,000,000 kronor (830,000,000 kronor). The principal import and export commodities were animal and vegetable products; minerals and metals; chemical products, drugs, dyes, lacquers, soaps, and fertilizers; hides and skins, rubber, textile materials; wood products, pulp, paper, etc.; machinery, transportation equipment, and instruments.

Finance. Budget estimates (for the fiscal year to June 30, 1946): revenue 3,208,988,000 kronor (3,186,400,000 kronor for 1944-45); expenditure 3,169,000,000 kronor (4,416,000,000 kronor). In 1943-44 actual revenue totaled 3,106,200,000 kronor; actual expenditure, 4,072,000,000 kronor. Expenditure (included in the foregoing figures) for national defense amounted to 2,030,000,000 kronor in the 1944-45 budget and to 2,122,000,000 kronor in 1943-44. The public debt increased from 2,634,000,000 kronor on June 30, 1939, to 11,550,000,000 kronor on Sept. 30, 1945. Currency notes in circulation on Sept. 30, 1945, totaled 2,567,000,000 kronor. The exchange rate of the krona from 1941-1945 was \$0.2385; 16.90 kronor = £1 sterling.

Production. The bread grain crop (wheat and rye) for 1944 totaled 899,500 metric tons. Feed grain crops (barley and oats) for 1944 totaled 1,413,000 metric tons. The sugar beet crop in 1944 was 1,803,000 metric tons (1,868,257 in 1943) harvested from 136,000 acres. Potatoes harvested in 1944 totaled 1,448,700 metric tons. Among the other important crops are hay, fodder, roots, peas, beans, and vetches. Livestock (1944 census): 2,834,177 cattle, 1,041,074 swine, 599,490 horses, 551,830 sheep, and 9,055,916 chickens.

Mineral and metallurgical output during 1945 included coal, iron ore, pig iron, ferro-alloys, steel ingots, manganese ore, tungsten, copper, zinc, aluminum, peat, and shale oil. Ball bearings, cream separators, lighthouse apparatus, telephone supplies, motors, and many kinds of electrical machinery are produced by the metallurgical industries. The public forests cover an area of 30,000 square miles. Wood-pulp output in 1943 totaled 1,240,000 metric tons. Other important industries are the manufacture of porcelain, glass, and textiles. In 1941 there were 18,757 industrial fac-

STATISTICS OF U S STATES

State	Area (sq. mi.)	Population 1940 Census	Capital	Governor	Inauguration and Term	Lieut. Gov.	Sec'y of State	Atty. Gen.
Alabama	51,609	2,832,961	Montgomery	Chauncey M. Sparks (D)	Jan. 1943, 4 yr	I. Handy Ellis	Sibyl Pool	Robert B. Harwood
Alaska	586,412	49,021	Phoenix	Sidney P. Osborn (D)	Jan. 1945, 2 yr	None	Don E. Garvey	John L. Sullivan
Arizona	113,900	1,949,387	Little Rock	Benjamin T. Laney (D)	Jan. 1945, 2 yr	J. L. Shaver	C. G. Hall	Guy E. Williams
Arkansas	53,102	1,949,387	Sacramento	Earl Warren (R)	Jan. 1943, 4 yr	Frederick F. Houser	Frank M. Jordan	Robert W. Kenny
California	158,693	6,907,387	Denver	John C. Vivian (R)	Jan. 1945, 2 yr	William E. Higby	Walter F. Morrison	H. Lawrence Hinkley
Colorado	104,247	1,123,296						
Connecticut	5,009	1,709,242	Hartford	Raymond E. Baldwin (R)	Jan. 1945, 2 yr	Wilbert Snow	Charles J. Prestia	William L. Hadden
Delaware	2,057	766,505	Dover	Walter W. Bacon (R)	Jan. 1945, 4 yr	Elbert N. Carvel	William A. Storey	Clair John Killoran
Florida	58,560	1,897,414	Tallahassee	Millard F. Caldwell (D)	Jan. 1945, 4 yr	None	Robert A. Gray	J. Tom Watson
Georgia	58,876	3,123,723	Atlanta	Ellis G. Arnall (D)	Jan. 1943, 4 yr	None	John B. Wilson	Eugene Cook
Idaho	83,557	524,573	Boise	Arnold Williams * (D)	Jan. 1945, 2 yr	Vacancy	Ira H. Masters	Frank Langley
Illinois	56,400	7,897,241	Springfield	Dwight H. Green (R)	Jan. 1945, 4 yr	Hugh W. Croes	Edward J. Barrett	George F. Barrett
Indiana	36,201	2,927,796	Indianapolis	Ralph F. Gates (R)	Jan. 1945, 4 yr	Richard T. James	Rue J. Alexander	James A. Emmert
Iowa	56,280	2,538,268	Des Moines	Robert D. Blue (R)	Jan. 1945, 4 yr	K. A. Evans	Wayne M. Ropes	John M. Rankin
Kansas	81,581	1,801,028	Topeka	Andrew F. Schoenappel (R)	Jan. 1945, 2 yr	Jess C. Denious	Frank J. Ryan	A. B. Mitchell
Kentucky	82,276	2,845,627	Frankfort	Simcoe S. Willie (R)	Dec. 1943, 4 yr	Kenneth H. Tuggle	Charles K. O'Connell	Eldon S. Dummitt
Kentucky	40,386							
Louisiana	48,592	2,363,880	Baton Rouge	James H. Davis (D)	May 1945, 4 yr	J. Emile Verret	Wade O. Martin, Jr.	Fred S. LeBlanc
Maine	33,215	1,847,226	Augusta	Horace A. Hildreth (R)	Jan. 1945, 2 yr	None	Harold I. Goss	Ralph W. Farris
Maryland	18,244	1,892,244	Annapolis	Herbert R. O'Connor (D)	Jan. 1943, 4 yr	None	William J. McWilliams	Alfred W. Curran
Massachusetts	8,257	4,318,721	Boston	Maurice T. Tobin (D)	Jan. 1945, 2 yr	Robert F. Bradford	Frederic H. Cook	Charles A. Barnes
Michigan	58,216	6,256,106	Lansing	Harry F. Kelly (R)	Jan. 1945, 2 yr	Vernon J. Brown	Herman H. Dugan	John R. Dethmers
Minnesota	84,068	2,792,300	St. Paul	Edward J. Thye (R)	Jan. 1945, 2 yr	C. Elmer Anderson	Mike Holm	J. A. A. Burquist
Mississippi	47,716	2,183,795	Jackson	Thomas L. Bailey (D)	Jan. 1945, 4 yr	Fielding J. Wright	Walker Wood	Geek L. Rice
Missouri	69,674	3,784,664	Jefferson City	Phil M. Donnelly (D)	Jan. 1945, 4 yr	Walter N. Davis	Walter Ball	J. E. Taylor
Montana	147,138	659,446	Helena	Sam C. Ford (R)	Jan. 1945, 4 yr	Ernest T. Eaton	Sam W. Mitchell	R. V. Bottomley
Nebraska	77,237	1,315,834	Lincoln	Dwight Gruelord (R)	Jan. 1945, 4 yr	Roy W. Johnson	Frank Marat	Walker R. Johnson
Nevada	110,540	110,247	Carson City	Vail Pittman * (D)	Jan. 1945, 4 yr	Vacancy	Malcolm E. McEachin	Alan H. Bible
New Hampshire	9,204	491,534	Concord	Charles M. Dale (R)	Jan. 1945, 2 yr	None	Enoch D. Fuller	Frank R. Kenison
New Jersey	7,836	4,480,165	Trenton	Walter F. Edge (R)	Jan. 1944, 2 yr	None	Joseph A. Brophy	Walter D. Van Riper
New Mexico	121,066	1,351,818	Santa Fe	John J. Dempsey (D)	Jan. 1945, 2 yr	J. B. Jones	Cecilia T. Cleveland	Clyde C. McCulloch
New York	49,576	13,479,142	Albany	Thomas E. Dewey (R)	Jan. 1943, 4 yr	Joe R. Hanley	Thomas J. Curran	Nathan L. Goldstein
North Carolina	52,712	3,571,823	Raleigh	Robert Gregg Cherry (D)	Jan. 1945, 4 yr	L. Y. Ballentine	Thad Eure	Harry McMullan
North Dakota	70,645	641,935	Bismarck	Fred G. Andahl (R)	Jan. 1945, 2 yr	C. P. Dahl	Thomas Hall	Nelae G. Johnson
Ohio	41,222	6,907,612	Columbus	Frank J. Lausche (D)	Jan. 1945, 2 yr	George D. Nye	Edward J. Hummel	Hugh S. Jenkins
Oklahoma	69,019	2,336,434	Oklahoma City	Robert S. Kerr (D)	Jan. 1945, 2 yr	James E. Berry	Frank C. Carter	Randall S. Cobb
Oregon	69,981	1,089,684	Salem	Earl Snell (R)	Jan. 1943, 3 yr	None	Robert S. Farrell, Jr.	George W. Neuner
Pennsylvania	45,333	9,900,180	Harrisburg	Edward Martin (D)	Jan. 1943, 4 yr	John C. Bell, Jr.	Charles M. Morrison	James H. Duff
Rhode Island	1,214	713,346	Providence	John O. Pastore * (D)	Jan. 1945, 2 yr	Vacancy	Armand H. Cote	John H. Nolan
South Carolina	31,055	1,899,804	Columbia	Ransome J. Williams * (D)	Jan. 1943, 4 yr	Vacancy	W. P. Blackwell	John M. Daniel
South Dakota	77,047	642,961	Pierre	M. Q. Sharpe (R)	Jan. 1943, 4 yr	Sloux K. Grigaby	Mrs. L. M. Larsen	George T. Mickelson
Tennessee	42,246	2,915,841	Nashville	Jim Nance McCord (D)	Jan. 1945, 4 yr	None	Joe C. Carr	Roy A. Beeler
Texas	267,339	6,414,824	Austin	Coke R. Stevenson (D)	Jan. 1945, 4 yr	John Lee Smith	Claude Isbell	Grover Sellers
Utah	84,916	650,310	Salt Lake City	Herbert B. Maw (D)	Jan. 1945, 4 yr	None	E. E. Monson	Grover A. Giles
Vermont	9,609	359,231	Montpelier	Mortimer R. Proctor (R)	Jan. 1945, 2 yr	Lee E. Emerson	Rawson C. Myrick	Alban J. Parker
Virginia	40,815	2,877,773	Richmond	William M. Tuck (D)	Jan. 1946, 4 yr	Vacancy	Vacancy	Abram P. Staples
Washington	68,192	1,786,191	Olympia	Mon C. Wallgren (D)	Jan. 1945, 4 yr	Victor A. Meyers	Mrs. Belle Reeves	Smith Troy
West Virginia	24,181	1,901,974	Charleston	Clarence W. Meadows (D)	Jan. 1945, 4 yr	None	William S. O'Brien	Ira J. Partlow
Wisconsin	56,154	3,137,687	Madison	Walter S. Goodland (R)	Jan. 1945, 2 yr	Oscar A. Rennebohn	Fred R. Zimmerman	John E. Martin
Wyoming	97,914	250,742	Cheyenne	Lester C. Hunt (D)	Jan. 1943, 4 yr	None	William Jack	Louis J. O'Marr
Dist. of Columbia	69	658,018						

* To fill unexpired term of Charles Gossett, Nov., 1945. * Succeeded E. P. Carville, who resigned July 31, 1946. * Succeeded J. Howard McGrath, who resigned to become Solicitor General of U.S. Jan. 2, 1945. * Succeeded Olan D. Johnston Jan. 2, 1945. * Administered by Committee appointed by the President, confirmed by the Senate, and consisting of John Russell Young, Guy Mason, and Col. Charles W. Kutz, C.E.

ories, with a total of 550,000 employees; total power used amounted to 6,463,673 effective horsepower.

Transportation. The roads of Sweden, on Jan. 1, 1943, totaled 55,550 miles. At the end of 1943 the railroads totaled 10,380 miles (including 3,243 miles of electrified line), of which 6,733 miles were owned by the state. Commercial airlines link the chief cities and maintain services, together with foreign companies, with nearby foreign countries. The Swedish mercantile marine, on July 1, 1944, comprised 2,107 ships aggregating 1,475,348 gross tons.

Government. The Constitution of 1809, as subsequently amended, vested executive power in a hereditary King, acting under the advice of a Council of State (Cabinet), which is responsible to the Diet or Riksdag. The Upper Chamber of the Riksdag has 150 members, one-eighth of whom are elected annually by provincial and city councils; the Lower Chamber has 230 members, elected by direct male and female suffrage for four years. Party strength in the Lower Chamber, as a result of the general election of Sept. 17, 1944: Social-Democrats 115, Conservatives 39, Agrarians 35, People's Party (Liberals) 26, Communists 15.

Events 1945. After five years of skilful maneuvering between two warring blocs surrounding her on all sides, Sweden, in the early months of 1945, came within an ace of being drawn into the final phase of the war. In previous years, Sweden's neutrality had been jeopardized mainly by German demands and occasionally by Allied counter-pressure; this time, internal forces were striving for a last-hour belligerency.

Some of these forces, as in the case of Turkey, were prompted solely by considerations of national self-interest. They realized that Germany irrevocably had lost the war: hence Sweden stood to risk little and gain much by casting in her lot with the Allies at the last moment.

These opportunists, however, were decidedly in a minority. By far more numerous were those who, incensed at the Germans' apparent determination to fight it out to the last in Norway, sought to rescue the sister nation from the double threat of starvation and bloodshed. By that time, Germany had been so weakened on all fronts that even a comparatively small, but extremely well trained and equipped force like the Swedish Army would have sufficed to chase the Germans out of Norway.

If Sweden had wanted to join the war against Germany, she would not have needed to look around for pretexts. Indeed, the Nazis, already confronted with insuperable odds, continued needlessly to provoke their last friendly neighbors.

Disregarding repeated Swedish protests, German V-installations on Bornholm and in Norway went on, throughout the first quarter of 1945, firing robot bombs and rockets across Swedish territory. Nazi airmen still engaged Swedish patrol planes guarding that country's neutrality and on April 3 a Swedish pursuit plane was downed and its pilot killed by a German fighter.

Most important of all, the Germans' revived Skagerrak blockade halted the infrequent safe-conduct ships that had been carrying on a semblance of Swedish foreign trade. As Foreign Minister Christian Guenther put it in an address at Lund, early in February, "Sweden today is more completely isolated from world trade than ever before."

Thus, when the Norwegian Government-in-exile in March and April made repeated appeals to

Sweden to mobilize and keep troops ready along the border, the atmosphere for such a move was more favorable than ever before. In the press and in the Riksdag, too, the interventionists showed greater strength than they had ever had.

The Swedish Government, however, was still opposed to any form of armed intervention. While frequently deploring and protesting the Nazi terror in Norway, it declined to go further. In this policy, it was backed by a vast majority of Riksdag members. In a secret session held on April 27, the House finally decided against the use of armed force to bring about a German surrender in Norway.

By that time the issue had already become largely academic as a result of the negotiations conducted by Count Folke Bernadotte of Sweden with Himmler and other high Nazi officials. These talks, which were held mainly at Luebeck, originally bore only on the treatment of Scandinavian deportees in Germany, but later they were extended to the question of a German surrender (see Germany).

According to Bernadotte, Himmler agreed in principle to surrender the German Army in Norway to Swedish forces, but this plan fell through when the Allies turned down the Nazi chief's conditional surrender offer.

Germany's collapse, and the advent of peace in Europe were celebrated throughout Sweden. On May 4, Premier Per Albin Hansson, on hearing that Denmark again was free, expressed his satisfaction and declared that he hoped this piece of news would soon be "followed by another of the same kind." King Gustav on May 7 broadcast a message of congratulations to Denmark and Norway and thanked his people for their help in keeping Sweden at peace. The Swedish Premier and the Foreign Minister also addressed the nation in the same sense.

Following the unconditional surrender of Germany, Sweden acted quickly to liquidate all Nazi agencies in the country. The German legation in Stockholm was taken over on May 8 and its personnel was interned for deportation, which was effected in August. All German propaganda agencies and so-called "cultural institutions" also were closed down.

Strike Hits Reconversion. The transition to peace was accompanied in Sweden by pretty much the same difficulties on the labor front that the United States went through several months later.

The Swedish trade unions, at the start of the year, were stronger than they had ever been before, with a total membership of 1,100,000. During the emergency, no major strike had occurred in accordance with a pledge given by the trade unions at the start of the war. Sweden, though it never entered the conflict, maintained a high degree of military preparedness throughout, and labor cooperated fully.

At the approach of peace however, and when it was clear that Sweden was out of danger, labor became restive. The powerful Metal Workers' Union, in particular, in which the Communists are strong, decided to fight it out on a wage-increase demand rejected by management. On Feb. 5, 125,000 members of the Metal Workers' Union went on strike; it was the greatest labor conflict in twenty-five years.

The strike lasted five months, until July 6, with a loss of 15,000,000 work-days. At first the employers welcomed the strike because of the difficulty of obtaining coal and other fuel for their plants, but after the trade lanes had been opened

again, they sought a settlement. This was made easier by a curious incident. As a result of the strike, Swedish deliveries of metal products to Finland had been halted. This development placed a great strain on Finland's reparations deliveries to Russia. In June, the Finnish Communist leader (and Minister of Interior) Yrjö Leino flew to Stockholm to plead with the Swedish metal workers to resume work. His efforts were at least partly successful.

The threat of another big strike, in the merchant marine, was averted by a last-hour settlement on June 9. If the strike had been called, it would have made impossible the great Swedish export offensive that developed in the latter part of the year, especially toward South America and other overseas countries. In June, July, and August Sweden signed trade pacts with half a dozen countries, especially Argentina and Poland. The latter promised to supply Sweden with 4,000,000 tons of badly needed coal during 1946, in exchange for iron ore and industrial products. On a smaller scale, Polish coal began to arrive in Sweden in August and deliveries increased steadily up to the end of the year, keeping Swedish industry going, but little was left for domestic users.

New Cabinet, Same Premier. With the passing of the emergency, the Government of National Union formed on December 13, 1939, lost its *raison d'être* and it resigned on July 31. Immediately Per Albin Hansson formed a new Cabinet, composed exclusively of members of his own Social-Democratic party. The most important effect of this change was the elimination of the controversial Foreign Minister Guenther who, throughout the war, had stood for a neutrality not unfriendly to the Germans. He was replaced by Professor Oesten Undén, a fervent spokesman of international cooperation. Since his appointment, Mr. Undén has already made several strong bids for admission of Sweden into the United Nations Organization.

Another important addition to the Cabinet was Prof. Gunnar Myrdal, internationally known economist, as Minister of Commerce. Along with the Finance Minister Ernst Wigforss, Prof. Myrdal heads the "New Deal" group in the new Government, which aims at partial socialization of Sweden's economy.

In September, Mr. Hansson was able to celebrate his thirteenth anniversary as Premier of Sweden (except for a three-months' interruption in 1936). He preceded Adolph Hitler as head of government, and outlasted him—a unique achievement in the annals of our time. Since the next general election in Sweden will not come before 1948, Mr. Hansson, whose party controls half the votes in the Lower Chamber of the Riksdag and has a clear majority in the Upper House, stands a good chance of adding a few more years to his record.

Sweden Eyes Russia. The disappearance of Germany from the map of Europe made it imperative for Sweden to reorient her political and economic life toward friendship with the power that had for centuries been Sweden's antagonist: Russia.

Such a shift of policy is not easy, but the Swedes worked hard at it throughout the year. The Russians, for their part, did not make things easier for the Swedes. Intermittently, the Soviet press renewed its attacks on Sweden and Moscow's diplomatic influence made itself felt repeatedly.

A few days after Germany's surrender, the Soviet Government protested in Stockholm, much in the same fashion hitherto used by Germany against an article on Stalin that had been published in the fortnightly review *Obs!* The Swedish

Government on May 18 conveyed its regrets over the incident to Moscow, but refused to take police action against the review on the grounds that such a procedure would be incompatible with the principles of press freedom. Moscow let it go at that, except for a recrudescence of anti-Swedish articles in the press.

The prolonged Russian occupation of the Danish island of Bornholm, that lies within easy striking distance of Sweden, also created an undercurrent of tension between the two countries. The Swedish Government discouraged public discussion of the subject, but the uneasiness remained.

Late in November, an incident took place that strikingly illustrated the extent of Russia's present influence on Sweden. The Soviet Government demanded extradition of 2,700 German soldiers, including 157 Baltic nationals, who had fled to Sweden in the last days of the war. Although public opinion in Sweden overwhelmingly opposed such a move, the Government reluctantly gave in to the Soviet demand.

The interned Germans and Balts appealed to King Gustav, who did not intervene, however. When the Swedish authorities, in the last week of November, ordered the forcible deportation of the internees onto a Soviet transport, riots broke out in several camps that had to be suppressed by the use of Swedish troops. Three internees committed suicide and about 600 were hospitalized as a result of self-inflicted wounds or hunger strikes. The affair caused a grave commotion throughout the country.

JOACHIM JOESTEN.

SWEDISH LITERATURE. Despite her neutrality Sweden was not unconcerned with the outcome of the war. During the last year of the war, Swedish literature reflected a genuine, if passive, interest in the conflict.

Many Swedish writers, having kept close contact with their Scandinavian colleagues who were refugees in Sweden and who had worked actively for the underground press in Norway and Denmark, were strongly pro-Allied. Much of the work of these pro-Allied writers was aimed at keeping Swedish neutrality as free from Nazi influence as possible. Leading among them were the novelists, Eyvind Johnson and Vilhelm Moberg. For several years Johnson edited political magazines for secret export to the underground in Nazi-dominated neighbor countries. In fact, toward the last months of the war, these authors confined themselves almost entirely to political writing and were subsequently received in the liberated countries as honored visitors.

Perhaps the most interesting book of the year was the first volume of Fredrik Böök's biography of the Swedish poet and Nobel prize winner, Verner von Heidenstam. Heidenstam was the key literary figure in the movement for Swedish nationalism which flourished during the 1890's. In addition to Böök's analysis, a new volume of memoirs, *Vägen till Öralid*, was written by Kate Bang, who for two decades was a close friend of Heidenstam's. Of the many novels published, however, none was comparable to Pär Lagerkvist's Renaissance study, *The Dwarf*, 1944 (published in America, 1945). The only well-known, elder novelist to write a new book was Sigfrid Siwertz. In his novel, *Förtroenden*, Siwertz analyzes false confession and suggests that the nature of such falsehood exposes the confessor as accurately as truth. Among the well-known younger authors were Frans G. Bengtsson, who published the second and last volume of his

Viking saga, *Röde Orm*, and Olle Hedberg, an analytical psychologist of French schooling, who completed *Den felande länken*, the fourth and final volume of a series. A literary award went to Albin Widen for a novel on Swedes settling in America. Arvid Brenner, a sober analyst of middle-class life, wrote *Vintervägen*, his best book thus far. The two most gifted prose writers to arrive after 1940, Sivar Arner and Lars Ahlin, published new books, *Knekt och klerk* which takes its motives from the Middle Ages and *Min dod ar min* which analyzes human failure.

Ahlin is considered the best in the "school of the '40's," a group of young writers influenced by that school of modern American prose which includes Hemingway, Faulkner, Caldwell, McCullers, and Saroyan. Among those who have attempted the rather forceful literary style of this school are Peter William Nisser, Sven Bergström, Märten Edlund, and Bertil Lagerström but they have not succeeded too well. An exception is Stig Dagerman who published his first novel, *Ormen*.

Harry Martinson, one of the group of proletarian writers who dominated the literature of the 1930's and at the same time reflected the democratization of Sweden during the Social-Democratic regime, wrote *Passad*. This re-established him as a poet, after his period of lyrical prose on travels, nature, and political themes. Of the Eliot-Auden-Spender-Rilke school is Gunnar Ekelof; the new collection by this sharp-witted mystic is called *Non serviam*. Another poet with about the same literary background is Karl Vennberg, who with *Tideräkning* took a long step toward establishing a personal, caustic style.

Vilhelm Moberg, the prolific novelist, dramatist, and anti-Nazi political writer, published a new play, *Vår ofödde son*, probably his best to date. The young sociologist, Axel Strindberg, made his debut as playwright with *Neutrala klubben*, a satire on the timid souls who bowed to Nazism.

The translated novel which received the most attention from Swedish reviewers was Lillian Smith's novel, *Strange Fruit*.

THORSTEN JONSSON.

SWIMMING. Aquatic stars never have been respectful of old records and in 1945 they broke some thirty national marks and a couple of world standards.

Most notable feat of the year was the 2:21 clocking turned in for the 220-yard breast stroke by Joseph Verdeur, of the Bainbridge Naval Training Station, whose time for a short course clipped a full second from the universal record hung up by Richard Hough. Then, Alan Ford, former Yale ace on loan to Columbia as a Navy V-12 trainee, capped a career of sparkling performances by covering 100 yards free style in 0:49.4 for the 20-yard course to surpass the great Johnny Weissmuller's long-standing mark of 0:49.8. The Balboa Bullet also holds the world record of 0:49.7 for a 25-yard pool.

America's more photogenic competitors once again were led by Miss Ann Curtis of San Francisco, who bettered the women's short-course time for 400 yards free style when she swam the distance in 5:00.9 as against the previous American mark of 5:02.2. This attractive West Coast girl, who was named "Woman Athlete of the Year" in 1944, retained six national free style crowns and shattered numerous other records during the year.

In the Amateur Athletic Union (A.A.U.) indoor meet, the young free-style queen kept titles at 100, 220, and 440 yards to lead her Crystal

Plunge companions to the team championship.

Outdoors, Miss Curtis repeated in the 100, 400, and 800 meter events to pace the Crystal Plunge mermaids to the team honors for that meet also. Marion Pontaco, another San Francisco girl, dominated the back stroke events, annexing laurels in both national A.A.U. meets. Diving honors were divided, with Mrs. H. C. Morgan of San Francisco winning from the platform and springboard outdoors, while Miss Zoe Ann Olsen of Oakland, Calif., triumphed from the low and high boards indoors.

Keo Nakama of Ohio State was a consistent scorer among the men, the little Hawaiian annexing national senior outdoor titles at 200 and 400 meters free style and the indoor crown at 440 yards. Adolph Kiefer helped Bainbridge gain the A.A.U. indoor crown with victories in the 150-yard back stroke and the 300-yard medley. Jimmy McLane, the 14-year-old Akron, Ohio, boy who is hailed by many as the greatest distance swimmer of all time, continued his brilliant young career by capturing the 800 and 1,500 meter free style crowns as well as the distance laurels outdoors.

Michigan State, the Central Collegiate Conference ruler, added the A.A.U. outdoor crown to its collection. Ohio State took the National Collegiate Athletic Association (N.C.A.A.) championship. Mert Church of Michigan, with victories in the 50 and 100 yard free style contests; Seymour Schlanger of Ohio State, who took the 440 yard and 1,500 meter free-style races, and Hobart Billingsley of Ohio State, who annexed both diving crowns were double winners in the N.C.A.A. meet.

Army triumphed in the Eastern Intercollegiate League and Michigan retained its laurels in the Western Conference.

Four high school marks fell during the year, Larry Larimore of Roosevelt High in Des Moines, Iowa, turning in the most sparkling feat when he returned a clocking of 1:01.9 for 100 yards breast stroke, not missing by much Hough's world record of 1:00.6. Larimore also helped Roosevelt High establish two new schoolboy standards in medley relays.

Brooklyn Technical High was returned champion in New York Public Schools Athletic League competition.

THOMAS V. HANEY.

SWITZERLAND. A federated republic in west-central Europe. Area: 15,944 square miles. Population (June 1943 estimate): 4,343,000, compared with (1941 census) 4,265,703. Vital statistics for 1944 (rate per 1,000): births 19.4, deaths 11.9, marriages 7.9, infant mortality (deaths under one year per 1,000 live births) 42. Chief cities (1941 census): Bern (Berne), the capital, 130,331, Zurich 336,395, Basel (Basle) 162,105, Geneva 124,431, Lausanne 92,541, St. Gallen 62,530, Winterthur 58,883, Lucerne (Luzern) 54,716.

Education and Religion. Education is compulsory, the school age varying in the several cantons. Primary education is free. In 1942-43 there were 443,167 students in primary schools, 73,387 students in secondary and lower middle schools, and 11,785 students (1943-44) in the universities. Religious affiliations (1930 census): 2,230,303 Protestants, 1,666,350 Roman Catholics, and 17,973 Jews.

Production. Agricultural pursuits employ 20.8 percent of the population. Twenty-two percent of the land area is unproductive. The main crops (1943; in metric tons) were: wheat 243,900, po-

tatoes 1,812,900, fruit 970,000, sugar beets, and vegetables. Livestock (1944): 1,497,436 cattle (including 817,123 cows), 599,521 pigs, 218,485 goats, 209,075 sheep, and 147,339 horses. In 1944 the output of milk totaled 546,190,000 U.S. gall.

Minerals produced included salt, iron ore, aluminum, and manganese. Manufactures of importance include watches, clocks, machinery, textiles, electric equipment, chemicals, shoes, cheese, condensed milk, etc. In 1943 a total of 425,972 employees were employed in the 9,082 factories. The output of peat in 1943 totaled 420,000 metric tons. In the same year the production of beer reached 22 million gall. See below under *Events*.

Foreign Trade. In 1945 imports were valued at 1,225,000,000 Swiss francs (1,186,000,000 in 1944); exports 1,474,000,000 Swiss francs (1,132,000,000 in 1944). The main trading countries in prewar times were Germany, France, Italy, Great Britain, United States, and Argentina. A great deal of the trade with frontier countries in transit trade. See below under *Trade Trends*.

Finance. Budget (1945): ordinary revenue 407,500,000 francs, extraordinary revenue 385,000,000; ordinary expenditure 581,800,000 francs, extraordinary expenditure 1,825,000,000 francs. See below under *Financial Situation*.

Government. The Constitution of 1874 provides a republican confederation of 22 cantons or States. The Federal Assembly consists of two chambers; one, the Council of States, is composed of 44 members—two from each canton; the other chamber, the National Council, has 187 members, all elected quadrennially by the obligatory vote of males who have attained 20 years of age. The Federal Council consists of seven members, all elected quadrennially by vote of the united chambers of the Federal Assembly; by similar vote, but annually, are chosen, from among the seven, a President of the Confederation and a Vice President of the Federal Council. Each of the Federal Council's seven members is assigned to the direction of one of the seven Federal administrative departments. During 1945 the President was Eduard von Steiger, a member of the Farmers, Workers, and Middle Class Party. President for 1946: Dr. Karl Kobelt of St. Gallen canton. Vice President for 1946: Dr. Philippe Etter.

Events, 1945. Neutrality. In a world-wide armed conflict a small neutral is inevitably exposed to suspicion and pressure on all sides. Switzerland's neutrality, however, is no *ad hoc* policy of opportunism but one of the oldest historical traditions among nations. Dating back to the early 16th century, it has more and more become the *sine qua non* of her existence, chiefly because of the ethnical composition of her population, which comprises marginal groups of the three main linguistic bodies of the Continent, people speaking German, French or Italian.

This neutrality has long been a factor in European politics. It received its first official sanction at the hands of the great powers in the Peace of Westphalia, 1648, was solemnly confirmed and guaranteed in 1815 by the Congress of Vienna, embodied in the Swiss Constitution of 1848, and again guaranteed in 1920 by the Council of the League of Nations. Such recognition by the powers, however, also constituted a great responsibility, forcing Switzerland to maintain the largest army in the world in proportion to its population of 4 million citizens. Only such "bonded" neutrality had any prospect of commanding respect. It alone could insure each neighbor against a possible flank attack through Swiss territory.

Danger of Invasion. The threats and dangers of

invasion during World War II were many and continuous. The 2½ million German-speaking Swiss constituted a powerful ideological provocation to annexation to the Third Reich. Always the Nazis interpreted the maintenance of democratic institutions in Switzerland as an alignment with the enemies of the Reich and a breach of neutrality, for which Goebbels once held out prospects of deportation *en masse* to Siberia as soon as the U.S.S.R. was conquered.

At the beginning of 1945 only the single-track Brenner railway remained to the Nazis as a link between Germany and Italy. A German attempt, however hopeless, to capture the St. Gotthard and Simplon lines by invading Switzerland and thus to draw into the general ruin the little southern neighbor who had proved so provokingly impervious to totalitarian philosophy, was something the Swiss Army Command realistically reckoned with. But with the crossing of the Rhine by the Allied Armies and the occupation of southwestern Germany by French troops the last of a long chain of military threats to Switzerland had passed.

Pressure from the Allies. However, the decisive change in the military situation outside the Swiss borders merely brought about a shift of pressure from the German to the Allied side. The U.S.S.R. fired the first gun in this pressure offensive. In 1944 the U.S.S.R. had refused to participate in the Chicago Conference on international air communication, ostensibly because representatives of Switzerland had been invited. She accused Switzerland of being a Nazi satellite in the same way in which the Nazis had accused her of being an ally of "the plutocratic-democratic-bolshevist warmongers."

The poor *entente* between Switzerland and Soviet Russia dates back to 1918, when the Soviet representatives in Bern abused their diplomatic privileges to foment internal strife and to take a hand in the Swiss general strike. The Russian diplomats were then handed their passports and official relations ceased. Still, in 1941 a commercial treaty was negotiated between the two countries and remained in force for two months, until the outbreak of the war. Attempts on the part of Switzerland, following the snub at the occasion of the Chicago Conference, to reestablish diplomatic relations with Soviet Russia were answered with a curt Russian refusal, which led to the resignation, in December 1944, of M. Pilet-Golaz, chief of the Swiss Political Department.

Throughout 1945 the attitude of the U.S.S.R. constituted probably the most sour note in Swiss affairs. Nor was, perhaps, the suspicion quite unfounded that the detachments of the Red Army and groups of escaped Russian war prisoners from German prison camps that found their way across the Swiss border did so by way of fulfilling an official mission. Certain it is that the Russian internees alone—some 9,000—chose to constitute themselves a problem. Tales of Swiss torture chambers for Russians issued from Moscow, though the internment camps for the Russians were each under the direction of a Russian officer responsible to a Swiss officer and were visited and approved by the International Red Cross and by British diplomatic delegations.

A few incidents did occur to aggravate the situation. Two Russians were shot in 1944 by Swiss guards breaking up a fight between the internees who, when interfered with, turned against the guards. In April 1945 a Russian attacked a Swiss civilian and cut off his nose, the victim immediately after taking his own life. Another Swiss civil-

ian who was attacked died of his wounds. After the taking of the German capital by the Russians, Swiss residents of Berlin, including diplomatic personnel, were transported to the U.S.S.R. "in reprisal." Not till the close of the year, after the mutual repatriation of the Russians and the Swiss, did the tension cease.

Pressure exerted on Switzerland by the other Allies had its causes in economic affairs. Switzerland is one of the most highly industrialized countries in the world, normally only one-third self-sufficient and two-thirds dependent on international exchange of goods, yet land-locked and without industrial raw materials. Her only primary asset is hydroelectric power. Neutrality and political independence under such circumstances easily become problematical. Ever since the beginning of the industrial era Germany had been Switzerland's chief source of raw materials as well as the chief export market. With the rise of Hitler the two countries found themselves at opposite poles of the ideological scale.

Swiss diplomacy nevertheless succeeded in making the Third Reich supply her steel, coal, and other vital materials. Incredible as it may sound, the whole equipment of the Swiss Army, designed in the first line as a defense against Germany, was made of German metal. Switzerland was the only neighbor of the Nazis that succeeded in keeping them out of her borders. Two reasons why her nominal independence was saved were: (1) the strength of her defenses which would have made the price of conquest excessively high, (2) the fact that Swiss industries and railways, if left intact, were more serviceable to the Germans than another neighbor ruined by conquest. In return for being left alone and supplied with small amounts of coal and steel, Switzerland, completely surrounded by Axis powers since 1941, was obliged to furnish manufactured articles, chiefly machine parts, instruments and electricity.

Not before the end of 1944, when the course of events had definitely turned in their favor, did the Allies protest against this Swiss-German exchange. Their demands that Switzerland cease all traffic with Germany and stop the flow of coal to Italy over her railway lines could not at once be met. (1) Because this commerce was regulated by treaties, some of them, like the Gotthard Treaty concerning rail communications between Germany and Italy, antedating the war by many years, and Switzerland refused to regard treaty obligations as "scraps of paper." (2) Because a unilateral break would have meant an abandonment of her constitutional neutrality. (3) Because the Allies were neither willing nor in a position to supply Switzerland with any of the badly needed goods hitherto obtained from Germany.

The connection between this Swiss stand and the more or less simultaneous bombing of Swiss railway lines at Schaffhausen, Basel and Zurich by American bombers is not clear at this date. A fresh start in negotiations became possible chiefly through the unexpectedly rapid collapse of the German front east of the Rhine and the failure of Germany to fulfil her contracts of delivery. An Allied Commission composed of Mr. Laughlin Currie of the Economic Division of the U.S. State Department, Mr. Dingle Foot and M. Chagueraud was despatched to Bern. On March 8 an agreement was signed, on the basis of which Switzerland began to supply the Allied forces with instruments and was permitted to resume a trickle of overseas imports and exports through Spanish and Portuguese ports.

German Assets in Switzerland. The one real difficulty encountered was the question of the German assets in Switzerland, which the Allies claimed were theirs by right of conquest. The issue was confused by Allied propaganda concerning the alleged billions looted by the top-ranking Nazis that were safely protected by Swiss neutrality and Swiss banking secrecy, and obscured by this quasi-sacred old Swiss institution of the *Bankgeheimnis*, which guaranteed everybody, citizen and non-citizen alike, immunity even against governmental curiosity as to the amount of his financial assets.

However, on the understanding that she would brook no interference with her national sovereignty, Switzerland showed herself willing to put all her cards before the Allies. Special legislation was necessary to lift banking secrecy. All foreign assets (save those of Allied—but not Axis—diplomatic personnel) were blocked and a comprehensive census of them ordered. Members of Allied Legations in Bern had at all time access to these documents and records. The results were published in December.* Purely German assets turned out to be only about half of what they had been estimated. The problem of expropriating them, however, still remained. Neither under Swiss law nor under international law does there appear to be any basis for such procedure.

The Swiss claim priority on all German assets in their country up to the amount of the total German debt to them, which is estimated at 973,000,000 francs, or almost as much as all German assets in Switzerland. A large part of these debts antedates the Nazi regime, having been contracted by German municipalities and other public corporations under the Weimar Republic. Another part, perhaps not inconspicuous, represents assets of wealthy refugees. The international press has seized upon the supposedly fantastic German cash accumulations in Switzerland under the pretext that they form the germ of a new world-wide Nazi underground movement. The Swiss feel that the Allied claims on these assets lack every legal and moral basis. They feel justified in asking why such pressure is exerted only against a small nation but not a large one like the Argentine.

Financial Situation. The economic situation in Switzerland during 1945 cannot of course be regarded except in connection with the war, profoundly affected as it was, first by the Nazi hegemony in Europe and then by the Allied victory. The total cost of military defense is figured at 9,285 million francs, which raised the indebtedness of the Swiss Confederation from about 1.5 to 6.7 billion, a net of 342 percent. This, however, is all internal indebtedness. Switzerland has no foreign

* The exact figures are:

1) Assets of persons other than Swiss domiciled in Germany. 371,000,000 Swiss francs.

2) Assets of persons other than Swiss domiciled in Austria. 41,000,000 francs.

3) Assets of persons other than Swiss domiciled in other territories of the former Greater Reich 7,000,000 francs.

4) Assets of German nationals domiciled in Switzerland. 234,000,000 francs.

5) Assets of German nationals domiciled in countries other than Germany, Switzerland, and German-occupied territories. 79,000,000 francs.

Total. 752,000,000 francs.

Other foreign assets in Switzerland comprise the following groups and amounts.

1) Assets of persons domiciled in what used to be Greater Germany: 90,000,000 francs.

2) Assets of persons other than Swiss and German domiciled in Switzerland: 1,120,000,000 francs.

3) Assets of Germans domiciled in countries other than Switzerland and Germany. 25,000,000 francs.

Total: 235,000,000 francs.

(1 Swiss franc = U.S.\$0.28)

debts. The position of the Swiss franc, therefore, has remained strong.

Gold reserves of the Banque Nationale Suisse between 1938 and 1944 increased from 2.9 to 4.6 billions, largely because of the reconversion of dollar assets (blocked June 14, 1941) into gold, physically deposited in the United States, as well as because of the repatriation, for lack of trade, of other Swiss assets abroad. During the same period the total assets of all Swiss banks increased by 1,800 million francs, largely for the reasons given above. This, however, represents only one-third of a corresponding increase during World War I and, in spite of the frequent large government loans necessitated by war mobilization, is opposed by a decrease in the annual banking turnover between 1938 and 1944 of 27 percent. These figures also contradict the theory that Switzerland became the refuge for large amounts of Axis capital during the war.

Trade Trends. Three times as many persons are normally employed in Swiss industries working for export as there are in agriculture. Most of this export market vanished in 1941 with the Allied blockade and the German counter-blockade. During the first half of 1945 imports amounted to only one-seventh of normal and reflect the worldwide scarcity of foods, raw materials and tonnage. Exports during the same period of about half of normal, while bringing about the exceptional feature of a favorable trade balance (usually corrected, though, by "invisible" exports and tourists) seriously threaten the exhaustion of the remaining small stockpiles of raw materials, chiefly coal and iron. Trade with Germany, normally making up 31 percent of the total import-export volume, has practically stopped. On the other hand, trade with France and Italy shows signs of revival. The Argentine, Brazil, the United States and Canada have advanced to first positions as suppliers, and of the modest export remaining, the United States alone during the first half of 1945 has absorbed one-third.

Agricultural Development, etc. Though Switzerland miraculously escaped being pressed into the war, she was forced to live for a number of years on her own substance, a difficult feat considering that normally she was self-sufficient for barely four months out of twelve as regards food supplies. An intensive agrarian program succeeded by 1945 in doubling the prewar productive area of 444,780 acres, in raising to 60 percent of normal the country's food needs and achieving a meager subsistence minimum of bread grains, potatoes, fruits, and fodder, but leaving a very acute shortage of fresh green vegetables, butter, eggs, and meat.

Nevertheless, through the International Red Cross and other organizations, Switzerland is contributing a share more liberal than would have been allotted to her had she become a member of UNRRA for the relief of war victims. Small additional quantities of foodstuffs could during the war and can again now be imported from South America in Switzerland's own merchant fleet, but most of the available tonnage was and still is reserved for more important imports, among which coal ranks first.

Industrial Trends. In the order of importance metallurgy, textiles, food products, watches, footwear and pharmaceutical products rank first among Switzerland's industries and occupy about 42 percent of her normal working population. All these depend on free access to foreign raw materials and foreign export markets. In spite of the drastic curtailment of industrial production by the war, un-

employment was so far avoided, mainly because of the heavy war mobilization, the partial shift from industry to agriculture and, since the end of the war, thanks to the ready markets for such manufactured products as could be supplied with the available raw materials.

JAMES PETER ZOLLINGER.

SYRIA AND LEBANON. Two Arab republics, also known as the Levant States, on the east coast of the Mediterranean between Turkey and Palestine. The mandate over them was conferred on France by the League of Nations on July 24, 1922. Their independence has been proclaimed on several occasions since 1941, and had become nearly complete by the end of 1945. The area of Syria and Lebanon together is about 57,900 square miles. Damascus is the capital of Syria, and Beirut of Lebanon.

Government. For the prewar political status of Syria and Lebanon under French mandate see the YEAR BOOK for 1941, p. 638. For political developments since 1941 see the YEAR BOOKS for 1942 et. seq., especially that for 1944, pp. 608-09. Each country is now generally recognized as an independent republic with its own constitution. Each has a President and a Parliament. Following the agreement of Dec. 27, 1943, between the French Committee of National Liberation and the two republics, there took place a gradual transfer of certain powers and functions from the former to the latter. This process was speeded up by the events of 1945 (see below) and was expected to be completed in 1946.

Events, 1945. The year was one of the most agitated in the history of the Levant States. The promise of independence made by the French authorities in 1941, and renewed in 1943, still seemed to the Lebanese and Syrians to have been only partially fulfilled by the beginning of 1945. They therefore decided to settle the question once and for all, choosing a moment when the military and political prestige of France was still in eclipse.

In January the heads of both republics stated that they wished to negotiate with France only as part of a general agreement with the Allied Powers. They also demanded control over the "troupes speciales"—the armed forces raised by the French from among the inhabitants of Syria and Lebanon and used by them for police purposes in those countries. During the time that General Sir Edward Spears was the British representative in Syria earlier in the war he lent a sympathetic ear to such demands. However, the British Government was now pursuing a policy of not stirring up trouble or irritating France as long as the war continued in Europe and the Far East. Nevertheless the de Gaulle regime was very suspicious of the British. Indeed, on Feb. 2 the French Council of Ministers accused Britain of plotting against French interests in the Middle East and declared that France would "defend her prerogatives in Syria and maintain order." Instructions to that effect were sent to General Beynet, French Delegate-General in the Levant.

The Lebanese Minister to Great Britain, Camille Chamoun, declared in a formal statement on Feb. 5 that neither his government nor that of Syria would accept the "preponderant position" desired by France in their countries. The Syrian and Lebanese Governments backed up their demands that the French turn over the special troops by inserting military items in their budgets (£15,000,000 for Syria, and £5,000,000 for Lebanon). In mid-February the two Levant governments asked the Yalta Conference to use its good offices in order

to effect a settlement between them and France. Nothing came of this, though Prime Minister Churchill consented during his Cairo visit to discuss matters with President Shukri Bey el Kuwatly of Syria.

The Syrian Chamber voted on Feb. 26 to declare war against Germany and Japan; Lebanon on the 27th. Both governments took this step in order to be admitted to the San Francisco Conference, and were consequently distressed when invitations were not forthcoming. Eventually, however, the difficulty was straightened out, the two countries were invited, and on Apr. 12 their representatives signed the United Nations Declaration in Washington.

By mid-May the situation in both countries had become decidedly menacing for the French. Demonstrations and strikes were held in protest over the failure to obtain local control of the special troops. Feeling also ran high over the continued presence of French troops, although as a matter of fact there were relatively few in the country—fewer in number, probably, than the British forces there. Yet when a small contingent of less than 1,000 new French troops were sent to Syria, reportedly as replacements, the lid blew off. On May 21 Syria and Lebanon jointly asserted their full independence by breaking off negotiations with the French, whom they charged with trying to retain air and naval bases as well as certain other military facilities. On the following day the Syrian Government demanded that the French withdraw their troops from the country and began to call its citizens into the National Guard. On the 27th there was serious fighting in Aleppo and Hama while sandbags were thrown up in Damascus. Syrians began to desert from the French forces in ever-increasing numbers. Fighting spread throughout the country during the following days, culminating in a French artillery attack on Damascus that killed and wounded several hundred civilians.

On May 30 Foreign Minister Eden was forced to admit in Commons that the situation "had greatly deteriorated" and that the British Government was planning to take definite action. On the following day Prime Minister Churchill sent a peremptory note to General de Gaulle informing him that the Commander of the British forces in the Middle East had been ordered "to intervene to prevent a further effusion of blood in the interests of the whole Middle East which involves communications for war against Japan." He insisted that the French authorities immediately issue a cease fire order to their troops and withdraw them at once to their barracks. After this had been done, he declared, it would be possible to begin three-way talks (including the United States) in London. Naturally this virtual ultimatum stunned the French, particularly as it was made plain to them that the United States backed up the British position. On the second of June the Russians also intervened by sending notes to the other four principal Allied Powers suggesting the wisdom of timely action "to settle the conflict peacefully." By then British troops had restored order in Damascus after having confined French troops to their barracks. The French commander, General Oliva-Roget, proved to be uncooperative and was relieved of his command at Britain's request.

Naturally a person of General de Gaulle's character reacted very strongly against the Churchill statement of May 31. At a press conference on June 2 he declared that he had already given the cease fire order before Churchill's communication had been received, and that in any case it could not "change the situation." He placed the blame

for the Syrian trouble squarely on the British. He refused to admit that he or that any French Government had made any mistake, and asserted that the French people were solidly behind him. In general the tone of his interview was sarcastic and highly critical of the British. Such remarks were hardly calculated to smooth relations between the two powers. In reality, however, the British could afford to take a somewhat tolerant view of the situation since they were in military control of the Levant. Indeed their troops served to protect the French forces from further attack by the infuriated Syrians. On June 5 Mr. Churchill denied de Gaulle's charge that Britain had incited the troubles in Syria. The cause of these, he held, was the provocative acts of the French authorities. The hatred which the French had aroused against themselves in Syria was indicated on June 6 when President Kuwatly asserted that his countrymen would never tolerate the return of the French. Even French newspapers were excluded from the country. Meanwhile both Generals Oliva-Roget (who by June 7 was in Paris) and Beynet (still in Beirut) declared they had definite proof that the British had not only encouraged the uprising through agent provocateurs, but that they had actually armed the insurgents. By way of reply to these and other insinuations an official British statement of June 22 announced that Britain's only motive in intervening had been to keep the Middle East quiet as long as the war continued in the Far East. Any designs on French territory were explicitly repudiated.

The restoration of order was fairly general by the middle of June despite isolated outbreaks here and there. On July 1 the Syrian Government stated that the country was quiet, but that the fighting had cost 593 killed and 1,972 wounded.

Despite General de Gaulle's somewhat unbending attitude, early July saw the French preparing to give up what little authority remained to them in the Levant. On July 7 they announced that within forty-five days control over the remaining "troupes speciales," said to number in the neighborhood of 30,000, would be turned over to the governments of the two republics. These forces would thereupon become the nucleus of the new Syrian and Lebanese Armies. However, the few French troops still stationed in the Levant, estimated at around 5,000, were to remain for the time being in Lebanon. On Aug. 7, two weeks ahead of the date originally set, the "troupes speciales" were transferred, as promised, without any further incidents.

During the latter part of the summer and early fall there were several cabinet crises in Syria and Lebanon which, however, did not appear to have any deep significance as far as the external affairs of those two countries were concerned. Both governments were active in supporting the Arab League in its diplomatic efforts to prevent further Jewish immigration into Palestine (see PALESTINE; PAN ARAB AFFAIRS).

Meanwhile there still remained the problem of what to do with the French and British troops in the two countries. In order to regulate this situation Britain and France signed a pact on Dec. 13 by which they agreed to evacuate their troops from Syria and Lebanon; to consult and to give each other mutual support in all Middle East questions; and to confirm the independence of the two Levant States. As a matter of fact there were only a few French troops left in either Syria or Lebanon. The latter were to be evacuated when the UNO was in a position to guarantee the security of that country, a stipulation to which the Lebanese objected strenuously. The actual task of working out the

modus operandi of evacuation was left to the British and French military authorities on the spot. They began their meetings at Beirut on Dec. 21 and were still negotiating at the close of the year. Meanwhile the French officials in Lebanon had turned over to local officials the control of customs, radio, railways, and the other last vestiges of French authority.

Characteristics. The population of Syria in 1943 was 2,860,411, and of Lebanon, 1,047,745. The principal cities, with their estimated populations are: Damascus, 275,000; Aleppo, 265,000; and Beirut, 250,000. The population of Syria, and more particularly of Lebanon, is far from homogeneous, either racially or religiously. Although Arabic is the official language and is spoken by the majority of the inhabitants, there are important minorities of Armenians, Circassians, Jews, Turks, Turkomans, Kurds and others, including Europeans.

In Syria the majority is Moslem, mostly Sunni. In Lebanon the Christians constitute from 55 per cent to 60 per cent of the population, but are divided among themselves into various sects of which the Maronites, Greek Orthodox, Greek Catholics (Uniates), Armenians and Melkites are the most important numerically (in the order named). These and other denominations are also found in smaller numbers in Syria. Each of these churches has its own ecclesiastical organization and hierarchy. Altogether the racial and religious mosaic of which the two republics consist is a fruitful source of political complications, both domestic and foreign.

Education is provided by both government and private schools. The latter are sponsored by the various religious communities and by foreign missionary and cultural organizations. In Lebanon the Christian schools far outnumber those operated by the State and the Moslems. The contrary is true in Syria. At Beirut there is the American University and the French Catholic Université de St. Joseph, each offering a varied curriculum. Higher education in Syria is provided by the Arab University at Damascus.

The Country and Its Economy. Lebanon is a small country consisting of a narrow coastal plain and the Lebanon range which rises immediately behind it. There is little room for agriculture except in small tracts, many of which are terraced. However, rainfall is more plentiful here than in the interior. The central valley of Syria is fertile and relatively well watered. But east of the Anti-Lebanon Mountains the desert begins, and here nomadic pasturing and oasis culture are the rule. Little of the original forest cover remains on the mountains of either country, the famous Cedars of Lebanon being all but extinct.

The principal products of the soil, and their estimated output for both countries in 1943 were: wheat, 624,280 metric tons; barley, 330,485 metric tons; grapes, 292,622 metric tons; olives, 134,339 metric tons; figs, 54,178 metric tons; sorghum, 44,246 metric tons. Figures for the same year showed 2,492,000 sheep, 1,573,000 goats, 490,000 horses, 287,000 donkeys and 54,000 camels.

Few minerals are exploited, and these in small quantities. Further geological exploration may reveal resources not now known. Factories are few and on a small scale, but political independence will very likely lead to increased industrialization. One of the pipelines from the Kirkuk oil field terminates at Tripoli in the Lebanese Republic.

Foreign trade figures for 1943 gave imports a value of 246,171,000 Syrian Pounds and exports as worth 168,065,000 Syrian Pounds. The two prin-

cipal ports, both in Lebanon, are Beirut and Tripoli. There are over 1,000 miles of railroad, including the Syrian segment of the Istanbul-Baghdad line, the Aleppo-Damascus line, the Homs-Tripoli-Beirut-Haifa line (completed during the recent war) and the narrow gage Mecca railway running south from Damascus to Trans-Jordan. Beirut and Damascus are connected by a narrow-gage, partly cog-wheel line, but the highway now carries much of the traffic between these points. Several of the great inter-continental airlines pass through Syria.

ROBERT GALE WOOLBERT.

TANGIER. An internationalized district in northwestern Morocco diagonally across the Strait of Gibraltar from the British fortress. Area, 225 square miles, and population (1941), about 100,000 (36,500 native Moslems, 16,500 Europeans and 7,000 native Jews). Over half the population dwells in the city of Tangier.

Tangier forms part of the Empire of Morocco, the Sultan being represented there by a Mendoub. For a description of the regime set up by the Tangier Convention of Dec. 18, 1923, as amended on July 25, 1928, see YEAR BOOK for 1941, p. 729. This international government was overthrown on June 14, 1940, when troops from Spanish Morocco occupied the Zone, ostensibly to guarantee its neutrality. For further details see YEAR BOOK for 1944, p. 610. The official languages in the Tangier Zone are French, Spanish, and Arabic. The education of the native Moslems is left largely to the Koranic schools, though both the French and Spanish authorities maintain several educational institutions, to some of which natives are admitted.

The Tangier Zone has very little agricultural production and must import much of its food. Through its port, however, passes a considerable transit commerce, much of which is carried over the railway to Fez and other points in the French Zone. As a rule imports exceed exports in a ratio of eight or more to one.

Events, 1945. The victory of the Allies in Europe inevitably meant that an end would be put to the illegal occupation of the Tangier International Zone by the Franco regime. Early in June Spain indicated her willingness to negotiate the matter. After preliminary discussions during this same month, the governments of Great Britain, the United States and France decided to send delegates to a conference in Paris at which the status of Tangier would be decided without consulting Madrid. Representatives of these three Powers met at the Quai d'Orsay on July 2, only to be faced with a Soviet demand that Russia too be admitted. As a result of this request the conference was postponed temporarily.

The Soviet Government cited Russia's long-time interest in Tangier, as evidenced by her participation in the Algeiras Conference of 1906. It also pointed out that if Russia was not a signatory of the Tangier Convention of 1923, neither was the United States, which was nevertheless represented at the conference in Paris. The American delegation indicated that it had no objection to Russian participation; the French were known not to be opposed to it; but the British chose to delay until the question could be discussed at the forthcoming Big Three Conference at Berlin. Meanwhile the British elections resulted in the overturn of the Churchill Government and the installation of the Labor Party in power. By the end of July it was known that a Russian representative would be admitted to the conference when it resumed on Aug. 6. Finally, after another postponement to allow the

new Labor Government in Britain to get oriented, the conference reconvened on Aug. 10.

On Aug. 31 the representatives of the four Powers signed a preliminary agreement, which was described in a communiqué issued on Sept. 4 as follows: "According to the terms of these resolutions, the Spanish Government will be called upon to evacuate the Tangier zone; the sovereign rights of His Majesty, the Sultan, in the zone will be reestablished; the international administration will be restored on the basis of the Convention of 1923, modified in 1928; the United States of America and the U.S.S.R. are invited to collaborate in the administration; the regime thus established will be provisional and will remain in force until the conclusion of a new convention between the Powers signatories of the Act of Algeciras; and, finally, an international conference of the Powers signatories of the Act of Algeciras will be subsequently convoked in order to examine the changes in the Tangier statute that may be proposed by any of these Powers."

The last of the Spanish troops left the International Zone on Sept. 6. A diplomatic protest from Madrid to London got a chilly reception, and on Oct. 11 the Mendoub, the official delegate of the Sultan of Morocco, returned to Tangier aboard a French cruiser after five years of exile. The new international regime was installed with a Portuguese Admiral as the chief administrator. The Committee of Control for the International Zone was to include representatives of France, Britain, the United States, Portugal, Spain, Belgium, Russia, and the Netherlands. This temporary arrangement was supposed to be superseded by a more permanent one, to be fixed by a conference called in 1946, to which Spain would be admitted only if the Franco regime had been ousted by then.

ROBERT GALE WOOLBERT.

TARIFF COMMISSION, U.S. An independent nonpartisan agency of the U.S. Government, created in 1916, which investigates and reports upon tariff matters. It also handles cases of unfair practices in import trade. The Committee makes such investigations and reports and furnishes such information as may be required by the President, the House Ways and Means Committee, the Senate Finance Committee, or either branch of Congress. The work of the Commission falls into two groups, general administration and auxiliary services under the Secretary, and professional, scientific, and technical work under the Planning and Reviewing Committee. The war agencies called upon the Commission for assistance in determining many matters relating to the economic aspects of the war effort. Chairman: Oscar B. Ryder.

TAXATION. Congress enacted two major revenue laws during 1945. The first of these, the Tax Adjustment Act of 1945, became law July 31, 1945. The Revenue Act of 1945 went into effect November 8, 1945.

The Tax Adjustment Act, enacted while the war with Japan was still going on, was designed to provide additional cash to business for reconversion requirements, rather than to reduce the tax load. This was accomplished through four major provisions, as follows:

1. The postwar credit of 10 percent of excess profits taxes paid could be taken currently by corporations with respect to such taxes due for 1944 and subsequent years. This was tantamount to reducing the excess profits tax rate from 95 percent to 85 percent for the years 1944 and 1945.

2. Postwar excess profits tax refund bonds previously issued to corporations could be cashed by them on or after January 1, 1946, instead of waiting for the more distant maturities originally specified in the law.

3. Refunds due corporations on account of carrybacks of net operating losses and of unused excess profits tax credits could be secured more speedily. In the first place, corporations expecting credits on account of carrybacks are authorized to apply for an extension of the time for payment of taxes otherwise due in any taxable year ending after September 30, 1945. Secondly, application may be filed for a tentative carryback adjustment along with the return for the year in which the operating losses or unused excess profits tax credit is realized.

4. Corporations are authorized to apply for an immediate tentative adjustment of taxes on account of final amortization of defense facilities due to the cessation of hostilities. The Commissioner of Internal Revenue is required to dispose of such applications within 90 days.

This law also increased the specific exemption under the excess profits tax from \$10,000 to \$25,000, to aid smaller companies, beginning in 1946. However, since the excess profits tax was subsequently repealed, this reduction did not go into operation.

It has been officially estimated that the Tax Adjustment Act would increase corporation cash resources by some \$2,500,000,000, and would reduce current tax liabilities by some \$2,000,000,000. Thus, almost \$5,000,000,000 of additional cash resources would become available to finance reconversion.

The Revenue Act of 1945. Immediately after V-J Day, Congress went to work on a bill to grant some tax relief to corporate and individual taxpayers in 1946. While it was recognized that Federal expenditures would remain at a high level, it was felt that some reduction was justified because outlays would be contracted steadily as Government purchases of war materials and supplies were halted and millions of men were discharged from the armed forces. Minor differences developed between the Treasury, the House and the Senate as to the contents of the bill, but the measure as finally passed was regarded as final with regard to corporate tax rates, while more extended consideration of individual tax relief was scheduled for 1946.

The excess profits tax was repealed outright as of December 31, 1945. However, to protect corporations that face heavy reconversion expenses or losses in 1946, the carryback of unused excess profits credit will continue through 1946. The Senate Finance Committee, in its report on the bill, pointed out that "there is danger that the operation of the unused excess profits credit carryback provision, particularly in 1946, may make possible certain abuses . . . your committee will give further consideration to the necessity or desirability of retroactive legislation in this connection." The law also reduces corporate surtaxes from 16 to 14 percent, thus reducing the combined normal and surtax rate on corporate income from 40 to 38 percent. This is designed to give some measure of relief to the 90 percent of all corporations that did not pay excess profits tax. Smaller corporations received somewhat greater relief, since the surtax rate is made 6 percent on the first \$25,000 of surtax net income of corporations, 22 percent on the next \$25,000, and 14 percent on the entire net income if it exceeds \$50,000.

The new revenue law repeals the capital stock tax and the declared value excess profits tax, long

regarded as mere nuisance levies by corporations. The first of these taxes was repealed for years ending after June 30, 1945 and the second for years ending after June 30, 1946.

The Treasury estimated that these changes in corporate taxation would result in a net reduction of \$3,140,000,000 in taxes collected from corporations during the calendar year 1946. It should be recognized that the repeal of the excess profits tax would tend to increase normal and surtax collections, since corporate income formerly taxed as excess profits will now become taxable at the normal and surtax rates. During the four years 1942-45 in which the excess profits tax was in effect, the yield aggregated \$27,000,000,000 in revenue, or almost one-fourth of total Federal tax collections.

The War Contracts Renegotiation Act, which was regarded as a supplement to the excess profits tax, was extended from June 30 to Dec. 31 by act of Congress. Total sums recaptured by the Treasury through contract renegotiation during the four years that this legislation was in effect were estimated at almost \$7,000,000,000, but most of this saving was offset by reduced tax collections resulting from the deduction of renegotiation refunds from taxable income.

Substantial tax relief is accorded also to individual taxpayers. The exemption of \$500 for the spouse and each dependent hitherto allowed in computing the individual surtax will now be allowed in computing the 3 per cent individual normal tax. As a result, an estimated 12,000,000 persons in the low-income brackets will be relieved from paying income tax beginning with the taxable year 1946, although it does not affect their obligation to file returns. The statute still specifies that each individual whose gross income is \$500 or more must file a return, regardless of whether or not a tax is due. This law reduces by approximately one-fourth the total number of individuals subject to tax. Surtax rates are reduced by 3 percentage points in each bracket. For example, the 20 per cent surtax is reduced to 17 per cent, the 22 per cent surtax to 19 percent, etc. Relief is thus provided to all individual taxpayers subject to the surtax. In addition, the new law provides an over-all reduction of 5 percent in the total amount of normal and surtax due for the calendar year 1946. As a result of this over-all reduction, relief will be relatively greater for large than for small incomes.

Other provisions of the new revenue law applicable to individual taxpayers reduces the maximum normal and surtax rate applicable to any individual taxpayer from 90 to 85½ percent.

In line with the lower personal income tax rates, withholding rates applicable to wages and salaries paid on and after January 1, 1946, are also reduced. On a salary of \$200 monthly, for example, with one exemption, the withholding levy is reduced from \$32.20 to \$26.60.

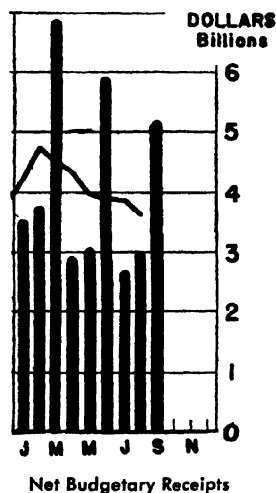
The new law liberalizes tax benefits to members of the armed services, providing for the exclusion from gross income of the entire service pay of enlisted personnel for taxable years beginning after 1940, and extending the \$1,500 exclusion in the case of officers until the termination of the present war is proclaimed by the President. Commissioned personnel may defer taxes attributable to service pay for the years 1940-1946, and pay off the accumulated tax due over a three-year period in 12 quarterly installments. Similar deferment may be made of pre-service earned income for 1940 or 1941, where the tax became payable after the taxpayer's entry into the armed forces.

The revenue law provides that the wartime excise tax rates shall lapse six months after the date of termination of hostilities. Provision is made in the 1945 Revenue Act for refunds of floor stock taxes on alcoholic beverages, and electric light bulbs at that time. The \$5 use tax on motor vehicles and the \$5-\$200 tax on boats was repealed outright as of June 30, 1946. The Federal Social Security tax is to remain frozen at 1 per cent through 1946.

Reductions in individual income tax collections and the repeal of the automobile use tax will reduce Treasury revenues by \$2,790,000,000 during the calendar year 1946, according to official estimates.

Postwar Tax Planning. The end of the war centered attention to a greater extent upon immediate tax reduction, rather than long-range tax planning. The most significant new proposal for postwar tax reduction was that issued by the Committee on Postwar Tax Policy headed by Roswell Magill, which issued a broad program for tax revision in August. This plan was described as "A Tax Program for a Solvent America." Its chief features are a single individual income tax beginning at 15-20 percent, and reaching maximum rates of 67-72 percent, designed to provide some 50 percent of total Federal revenues; elimination of double taxation of corporate income, and retention of the pay-as-you-go principle. A freezing of present capital gains and losses rates for five years is proposed, to end uncertainty on this score. Withdrawal of the Federal Government from estate and gift taxes is urged, to leave this field to the States. A single tax rate for corporate income, preferably at the same rate as the initial rate on individual income, is favored.

In years when expenditures rise, a Federal retail sales tax of 5 percent is proposed, on the ground that as expenditures rise less palatable methods of taxation are required to provide the added revenue from a maximum number of taxpayers. This policy would build public support for economy in Government Spending.



Future tax revision will depend largely upon the level of Federal expenditures. Government spending and tax collections both will reflect to a large extent the level of national income. Hence, future reductions in taxation may depend as much upon the state of business as upon fiscal policy. The extent of this dependence may be seen from the fact that the Committee on Postwar Tax Policy

suggests a 20 percent corporation and initial individual income tax rate to raise \$18,000,000,000 of revenue if the national income is \$140,000,000,000, but a corporation tax rate of 40 percent and an individual rate of 22 percent will be needed to raise the same amount of money with a national income of \$115,000,000,000.

Capital Gains Taxation. Rising prices for securities and real estate brought forward proposals for discouraging speculation. Most significant of these was that presented to the Senate Banking and Currency Committee in March by Chairman Marriner S. Eccles of the Board of Governors of the Federal Reserve System. Mr. Eccles proposed a special tax of 90 percent on capital gains derived from real estate, securities, and other capital assets acquired after January 1, 1945 and sold within two years. Thereafter, this special capital gains tax would decline by 10 percent or more annually, until it returns to the existing rate of 25 percent. Mr. Eccles contended that this tax would discourage speculation in homes, farms, stocks and business properties, and so would supplement ceilings imposed by the Emergency Price Control Act upon other prices. He charged that "the most serious gap in the line of defense against inflationary forces is the capital gains loophole in the wartime tax structure."

Strong opposition was displayed in Congress to proposals for changing capital gains rates, however. Also, many feared that a punitive capital gains tax would defeat its own purpose, in that it would discourage the sale of capital assets as well as their purchase, and by drying up offerings could even accelerate price increases.

With the refusal of Congress to give immediate consideration to modification of the capital gains tax, the President proposed in December that residential property be brought under price ceiling controls, so as to check speculation and rising prices for such property through direct curbs. Legislation is required for such ceilings.

JULES I. BOGEN.

TAX COURT OF THE UNITED STATES. An independent agency of the U.S. Government (formerly the U.S. Board of Tax Appeals, created by the Revenue Act of 1924). Its function is to determine, after hearing, whether there is a deficiency or an overpayment, where deficiencies have been determined by the Commissioner of Internal Revenue, in income, profits, estate, gift, and unjust enrichment taxes, and personal holding company surtaxes; to adjudicate controversies relating to excess profits on Navy contracts and Army aircraft contracts; and to review the action of the Commissioner in deficiency and refund cases founded on claims of abnormalities under excess profits and processing tax statutes. Presiding Judge: J. Edgar Murdock.

TENNESSEE VALLEY AUTHORITY (TVA). A corporation created by Congress in 1933 to develop the Tennessee River System in the interest of navigation, control of floods, and the generation and disposition of hydroelectric power. It conducts a program of water control and conservation, including fertilizer research. The TVA is constructing a system of dams (q.v.) which will provide a nine-foot navigable channel from the mouth of the river near Paducah, Ky., to Knoxville, Tenn., 648 river miles. The Tennessee basin includes parts of seven States, an area of 41,000 square miles with a population of about 3,000,000. See **WATERWAYS**.

The Corporation's power-producing system has an installed capacity of 2,201,902 kilowatt. New capacity will bring the total to 2,265,902 in 1946.

As of June 30, 1945, the corporation had contracts for sale of power at wholesale with 89 municipalities, 3 counties, 46 cooperatives, and 3 privately owned utility companies (in addition to contracts for purchase or interchange of power with 19 private companies). These agencies (the private companies excluded) distribute power to more than 600,000 ultimate consumers under retail rates agreed upon with the Authority. The corporation had contracts for bulk sales of firm and secondary power with 10 large industrial concerns. It is also providing power to 13 projects, plants, and bases of Federal agencies.

During the fiscal year 1945 the Authority's power sales exceeded 10,000,000,000 kw-hr and its gross revenues from the sale of power were nearly \$39,000,000. Chairman: David E. Lilienthal.

TENNIS. The annual championships held at the West Side Tennis Club in September proved a highlight of the 1945 sports schedule, for the tournament was the first of national status to follow World War II. Although staged only a short while after the cessation of hostilities, the tourney in the colorful stadium of Forest Hills attracted a sprinkling of foreign stars and enough big-name players to make it one of the best in many years.

Sgt. Frankie Parker of the Army Air Forces flew from Guam and successfully defended the singles title that he had won in 1944 after fifteen years of effort. Parker had taken part in no tournament play last season prior to the nationals, but he had had the benefit of workouts with Bobby Riggs and Don Budge, pro stars, in the Marianas and the champion gave a beautiful exhibition in the classic at Forest Hills.

Billy Talbert of Wilmington, Del., the man who had given Parker such a close battle in the 1944 final, was a heavy favorite to dethrone the titleholder. Talbert had won ten straight tournaments leading up to the nationals, victories in the U.S. clay-court, Delaware, Tri-state, Eastern, Seabright and Southampton events being listed among his achievements.

Talbert earned the right to meet Parker when he eliminated Francisco Segura, Ecuador's gift to tennis, 7-5, 6-3, 6-4, in the semi-final round while the champion was taking the measure of Elwood T. Cooke of Boston, 6-1, 8-6, 7-5. The final provided plenty of action and the crowd of 13,500 spectators saw the rivals battle for one hour and six minutes in the first set before Parker gained a 14-12 verdict. Then the titleholder, who refused to wilt in the face of Talbert's terrific service and driving, went on to triumph by 6-1, 6-2.

Parker won on his accuracy and beautiful backhand passing shots that time and again trapped his foe. Talbert, who was handicapped by a pulled tendon in his left knee, seemed to tire quickly after the long opening stanza.

The three-year reign of Miss Pauline Betz, Los Angeles, as women's national champion came to an end when the attractive coast star bowed by 3-6, 8-6, 6-4, to Mrs. Sarah Palfrey Cooke, the titleholder in 1941 who had been out of competition the previous season. The graceful Bostonian, who had vanquished Miss Betz at Rye and in the final of the clay-court championship earlier in the campaign, climaxed a great comeback with her victory at Forest Hills. Mrs. Cooke, who incidentally had beaten Miss Betz in the 1941 final, displayed a forehand and overhead game that proved too much for the energetic Californian.

Talbert gained some measure of satisfaction for his singles setback when he won the doubles crown with Lieut. Gardnar Mulloy, U. S. N. R., and kept the mixed doubles title with Miss Margaret Osborne, San Francisco. Miss Osborne, a consistent singles winner on the coast and the season's star in doubles, also retained her national doubles title with Miss Louise Brough, Beverly Hills, Calif., as her partner.

Following the blue-ribbon event at Forest Hills, Parker took singles honors in both the Pan-American and Pacific southwest tournaments. Miss Mary Arnold of Los Angeles was a triple victor in the Pan-American, taking the women's singles, the doubles with Miss Dorothy Head, Alameda, Calif., and the mixed doubles with Armando Vego.

J. Gilbert Hall, South Orange, N. J., kept his U. S. veterans' title and won doubles laurels with Sydney Adelstein, New York. Miss Barbara Wilkins, New Rochelle, N. Y., scored in the girls' national indoor event, when Shirley Fry, Akron, did not defend, but the Ohio miss kept her outdoor championship. The women's indoor title went to Mrs. Helen Pedersen Rihbany, New York. Little Connie Clifton of Rollins was victor in the women's intercollegiate while Segura, representing Miami U., won men's laurels for the third year in a row.

The end of the war in Europe found tennis coming back into the sports picture abroad. The presence of many U. S. players gave spice to the few tournaments that were held. Sgt. Charles E. Hare of Chicago and Pvt. Budge Patty of Hollywood were outstanding, while Lieut. E. G. Moylan of the U. S. Navy found enough time from his duties to win the championship of Ireland.

Welby Van Horn, Atlanta, took U. S. pro singles honors although Frankie Kovacs, Oakland, Calif., earned top ranking of the World's Professional Association. The world hard-court title was won by Bobby Riggs, Los Angeles ace.

THOMAS V. HANEY.

TERRITORIES AND ISLAND POSSESSIONS, Division of. The Division of the U. S. Department of the Interior which administers the territories and possessions of the United States. See the separate article on each. Director: Benjamin W. Thoron.

TEXTILE FOUNDATION, Inc. A Foundation created in 1930 within the U. S. Department of Commerce to conduct research for the benefit and development of the textile industry and its allied branches.

Sixteen research associates are working in the laboratories of the Textile Foundation at the National Bureau of Standards on problems related to the war effort. These projects include investigations related to clothing for aviators; clothing for jungle troops; water repellency treatments for military fabrics; deterioration of military fabrics through exposure to the elements as well as to various types of chemicals; influence of different types of fibers on the warmth and serviceability of blankets, underwear, and clothing; and shrink-proofing treatments for wool socks, underwear, etc. Chairman: Franklin W. Hobbs.

THEATER. Lamentably and, moreover, well-nigh incredibly, most of the ills that, from the standpoint of dramatic art, had so afflicted the theater in 1944 recurred in 1945 in even more aggravated form, at least until near the close of the year. The war appeared to have drained off, in almost every direction, the various talents essential to this form of endeavor. The one perceptible difference was that, particularly as the fall season

progressed, the very low-grade plays seemed to linger less long—to effect more precipitate get-aways, frequently within the week, occasionally after only the second performance. Audiences, more preponderantly in uniform than ever, had apparently gained in discrimination, which possibly speaks well for the quality of entertainment that had been purveyed to the servicemen in the war zones. And again, as for several years past, items that stood out even moderately above the general, run-of-the-mill level prospered as though they had been given the full measure of critical approval instead of luke-warm receptions. So that, once more, we are dealing rather with the exceptions than with the rule.

Happily there were a few notable exceptions, and the very first play to open in New York in the new year was one of them—*The Hasty Heart*, a comedy by John Patrick with overtones of pathos expertly blended. The scene was a wartime convalescent ward on the Assam-Burma front; the central figure a young Scotsman with, unknown to himself, an incurable malady leaving him only a few weeks to live. His ward-mates, warned in advance to keep the secret, outdo themselves in clumsy efforts at kindness which at first fall on barren ground. The victim's brief life has been of the hard variety and he distrusts this unaccustomed benevolence, but eventually warms to it and to the patient ministrations of the youthful nurse; which leads to further complications when, of necessity, he learns the truth. Admirably acted by Richard Basehart as the Scot, John Lund as the American in the next cot, Anne Burr as the nurse, and several other well-chosen players, the piece scored deserved success. The good taste of metropolitan theater-goers, frequently open to question, was put to the test and, happily, not found wanting when a modernized version of the elderly farce once known as *Ladies' Night*, fresh from a run of over a year in Chicago as *Good Night, Ladies*, managed to survive but a few weeks in New York. Until mid-December Shakespeare was represented solely by Margaret Webster's modern interpretation of his rarely staged and vaguely understood comedy-fantasy, *The Tempest*, which, though agreeable entertainment in itself, was quite as much Webster as Shakespeare, played by a cast including Vera Zorina, best known as a ballerina, in the role of Ariel, the Negro actor Canada Lee as Caliban, Arnold Moss as a stately Prospero, Frances Heflin as the ethereal Miranda, and Paul Leyssac, Philip Huston and Vito Christini in the other outstanding parts. Its hundred performances doubtless established a record for that work of the Bard. But a musical item with book by Herbert and Dorothy Fields and score by Sigmund Romberg, entitled *Up in Central Park*, featuring echoes of New York's scandalous Tweed ring as well as the famous cartoonist, Thomas Nast, all in the spirit of Currier and Ives, made its appearance at the end of January and continued throughout the year with Wilbur Evans, Maureen Cannon, Noah Beery, Sr., and Maurice Burke prominent in the tuneful romance.

Moderate success attended *The Overtons*, a negligible comedy by Vincent Lawrence employing the services of Jack Whiting, Arlene Francis, Glenda Farrell, and Walter N. Greaza; *Hope for the Best*, by William McCleery, concerned with the beneficent effect of true romance on the career of a newspaper columnist as exemplified mainly by Franchot Tone, Jane Wyatt, Joan Wetmore and Doro Merande; and Philip Barry's fantastic *Foolish Notion*, in which the Theater Guild starred Tal-

lulah Bankhead with a supporting cast including Henry Hull, Donald Cook, Aubrey Mather and youthful Joan Shepard. Far happier, surprisingly, was the lot of a still more fanciful "legend with music" called *Dark of the Moon*, by two hitherto unknown young authors, Howard Richardson and William Berney, based on a version of the Carolina mountain ballad of *Barbara Allen* and first disclosed in one of the preceding summer's experimental offerings, which, with Richard Hart and Carol Stone in the leading roles, scored a long and gratifying run. But George Kelly, reappearing after a long silence as the author of *The Deep Mrs. Sykes*, was found to have portrayed in his central character a woman of so disagreeable and reprehensible a nature that the public lost interest in her after two months despite masterly acting by Catherine Willard in the title role, and Jean Dixon, Neil Hamilton, and Romney Brent in others. In contrast, an exceedingly light comedy, *Kiss Them for Me*, fashioned by Luther Davis from Frederic Wakeman's novel, *Shore Leave*, depicting the hectic four days' furlough of a trio of servicemen in San Francisco, caught the popular fancy and held it for a substantial period. Richard Widmark, Dennis King, Jr., and Richard Davis figured merrily as the three.

Late in March Katharine Cornell revived *The Barretts of Wimpole Street* for an engagement lasting into June with virtually the same company, including Brian Aherne and Brenda Forbes of the original 1931 cast, that had just completed a tour of the American army camps in Europe in this play. And then followed what will very likely go into the permanent record as the two greatest stage triumphs of 1945 and may be confidently expected to be still flourishing when this history is written for 1946. The first was *The Glass Menagerie*, by Tennessee Williams, co-starring Laurette Taylor, who returned after a considerable absence, and Eddie Dowling, who was also a co-producer in the case. It was a so-called "memory play" with Mr. Dowling, as narrator, introducing the various divisions, expressionistically staged. Miss Taylor accumulated new laurels by her expert, glowing and genuinely moving portrait of a faded southern belle who, with a host of admirers to choose from, had married unwisely, but for love, and had lived to suffer the consequences if not to regret it. Now she is reduced to shabby lodgings in a dingy back alley which she shares with her son, who too greatly resembles his father in his irresponsible roving disposition, and her daughter, crippled from childhood and inordinately shy. Looking ahead, Amanda, the mother, can see but little hope for her daughter Laura's welfare unless a suitable husband for her can be discovered; but how this can happen when Laura is so shy and sensitive, so given to lavishing all her affection on her collection of little glass animals, is a problem indeed. Tom, the son, is constantly urged, even implored, to do something about it; and eventually gives indication of progress—a chap from the warehouse, where both are employed, has accepted an invitation to supper. Great, and extravagant, preparations are made. Amanda brings out all her treasured old-time finery. But, alas, when the party is over, it transpires that Tom had failed to learn that his friend already had a girl of his own. But—maybe someone more eligible will turn up. Though the play is essentially Miss Taylor's, all three of her associates share in the honors—Mr. Dowling as Tom, Julie Haydon as the pathetic Laura, Anthony Ross as the Gentleman Caller. And very shortly after its appearance *The Glass Menagerie* was

awarded the annual prize of the New York Drama Critics' Circle. The other distinguished item was a most ingenious musicalization by Oscar Hammerstein II and Richard Rodgers of Ferenc Molnar's *Liliom*, first presented by the Theater Guild in 1921, twice revived by other organizations and now again, in its new form, produced by the Guild. With its locale shifted to the New England coast in the year 1873, and with its chief character, now called Bill, turned into a big, bullying amusement park barker, the musical version, under the title of *Carousel*, gave every indication of rivaling the success of the Guild's still current *Oklahoma!* by the same librettist and composer. The principals in the cast were mainly newcomers, but very welcome ones—John Raitt as Bill, Jan Clayton as the heroine, Bambi Linn as their daughter, with Jean Darling, Jean Casto, Eric Mattson, Murvyn Vye, Peter Birch, Russell Collins and Jay Velie participating importantly. With music and lyrics of an exceptionally high order and voices that did them full justice, this fantasy took a position well above the familiar musical comedy level. The only other offering to achieve even moderate favor before the official close of the spring season was a comparatively short-lived drama by Edward Chodorov, *Common Ground*, concerned with the predicament of a troupe of USO camp entertainers trapped behind the Nazi lines in Italy. Philip Loeb, Paul McGrath and Luther Adler were its chief exponents.

These, then, were the exceptions of the earlier half of the year to the prevalent level of inferiority exemplified over the same period by nearly twice as many failures, some speedy, others of the lingering variety.

Summer found the usual broad scattering of vacational and experimental playhouses in the outlying districts everywhere commencing to benefit from the removal of at least some of the wartime restrictions that had for so long hampered their activities.

There were a few fitful but feeble efforts to get a new season under way close on the heels of the old one but summer was well advanced before any newcomer managed to secure a foothold. The first to do so was *Marinka*, a so-called "romantic musical" by George Marion, Jr., Karl Farkas and Emerich Kalman, rather stuffily presenting a somewhat idealized theory of the historic Mayerling affair. Notwithstanding a chilly reception, this subsisted until well into the fall but, oddly, made a speedy getaway very shortly after a new explanation of the "facts" of that famous episode came to light. Two other musicals in the same general old-fashioned category followed—*Mr. Strauss Goes to Boston*, exploiting an actual visit of the Waltz King to that city, and *Polonaise*, which utilized the personality of the Polish-American patriot, Kosciuszko, in a setting of airs by Chopin. The former tarried very briefly; the latter stayed the year out with Jan Kiepura contributing one of his stilted and heavy-handed portrayals in the chief role, and Marta Eggerth more happily cast in the opposite part. The first non-musical item to develop durable qualities was *You Touched Me*, a slender, unimportant but fairly ingratiating comedy by Tennessee Williams and Donald Windham, founded on a story by D. H. Lawrence, for the success of which the presence in its cast of Edmund Gwenn, Catherine Willard and Montgomery Clift was in large part responsible. Then came the season's first genuinely serious drama, *Deep Are the Roots*, by Arnaud d'Usseau and James Gow, concerned with, though not attempting to solve, the problem of the

Negro returning from distinguished service in the war to the same Southern white man's home from which he had responded to his country's call. Herein the acting honors went to Gordon Heath as the soldier, to Barbara Bel Geddes and Carol Goodner as the daughters of the white landowner, and Charles Waldron as their Senator father. Meanwhile, interspersed among the few offerings that emerged with varying degrees of credit, others, in the ratio of approximately three to one, arrived and departed in short order, a state of affairs that persisted until close to the end of the year.

Merely moderate success attended Thomas Job's *Therese*, a melodrama adapted from Zola's *Therese Raquin*, wherein Eva LeGallienne and Victor Jory enacted the guilty lovers and murderers while chief honors fell to Dame May Whitty for her portrayal of the speechless paralytic mother of their victim who eventually brings their crime to light. But a revival of the early Victor Herbert operetta, *The Red Mill*, with Eddie Foy, Jr., Michael O'Shea and Dorothy Stone, daughter of one of its original producers, in the principal roles, achieved a positive triumph. Fay Bainter returned to the New York stage, but for only a very short stay, in an ill-starred piece by Mary Chase, author of the highly successful *Harvey*, entitled *The Next Half Hour*. Another player long identified with the screen who was welcomed back from Hollywood in a drama that failed to measure up to the occasion was Spencer Tracy, who figured in the leading part in Robert E. Sherwood's *The Rugged Path*, a rambling war item that suggested its author had grown a bit rusty. Then another musical, called *Are You With It?*, quietly dropped in, promptly caught the popular fancy and, with Joan Roberts, *Oklahoma*'s original Laurey, as its bright particular feature, succeeded in holding it.

Not until mid-November did any new offering meet with general, but not even then unqualified, acclaim. This occasion was the latest opus by Howard Lindsay and Russel Crouse, *State of the Union*. A skilful blend of the serious and the humorous, the piece concerned the course of a Presidential campaign, just in the future, in which the candidate, from the political aspect, was on the order of the late Wendell Willkie. Ralph Bellamy capably filled this role, Ruth Hussey that of the candidate's wife, and Myron McCormick, Minor Watson and Kay Johnson the parts of next importance. A first play by Harry Brown, *A Sound of Hunting*, was adjudged an artistic success but tarried only briefly. Other late arrivals of varying degrees of excellence which at least remained current to the end of the year included *The Day Before Spring*, a musical depicting a college reunion; *The Mermaids Singing*, a comedy by John van Druten whose chief distinction lay in the fact that it was the third in a trio of current works by that playwright; *Strange Fruit*, a dramatization, something less than expert, by Lillian and Esther Smith of the former's much-discussed novel on the Negro problem from the angle of miscegenation; an inconsiderable farcical item by Joseph Fields and Jerome Chodorov entitled *The French Touch*, featuring Brian Aherne and Arlene Francis; another, *Brighten the Corner*, by John Cecil Holm, exploiting the familiar comic abilities of Charles Butterworth and disclosing unsuspected gifts of drollery in Lenore Lonergan in her first adult manifestation; Maurice Evans' revised production of *Hamlet*, speeded up, rendered more concise and less mediaeval, in the manner which his recent experiences in purveying entertainment to the GI camps in Europe had shown him was most ac-

ceptable to men of action; a novel comedy-fantasy, *Dream Girl*, written by Elmer Rice, providing his wife, Betty Field, with an exceptionally long and varied role; one more sprightly new musical item, *Billion Dollar Baby*, by the same contributors responsible for the year-old hit, *On the Town*, this time with Joan McCracken, another *Oklahoma* alumna, for its featured performer; S. N. Behrman's latest output, *Dunnigan's Daughter*, presented by the Theater Guild as its first offering of the season but regarded as considerably below its author's standard—Dennis King and June Havoc in the chief roles; a noteworthy revival, by a new and non-profit producing organization, Theater Incorporated, of Bernard Shaw's highly entertaining *Pygmalion* with a cast headed by Gertrude Lawrence and Raymond Massey and with Cecil Humphreys, Melville Cooper and Katherine Emmet as associates; and, finally, another first play by an author new to the stage, Arthur Laurents, in *Home of the Brave*, a promising, if somewhat confused, drama on a phase of the late war.

London, throughout the year, suffered from one of the same ironical difficulties that New York was likewise experiencing—the continuing popularity of a large number of long-run productions that precluded, for lack of sufficient theaters, the presentation of anything like the normal quota of new works, and this despite the fact that about thirty houses were in virtually continuous operation. One novelty, however, that did succeed in forging to the front was Emlyn Williams' drama of Welsh life, *The Wind of Heaven*, an uncommonly inspiring piece with a strongly spiritual flavor, whose chief roles were taken by the author himself, Diana Wynyard and Mehs Jenkins, a Welsh actress. Other items of British origin to get a hearing included a musical, *Strike It Again*, with Sidney Fields as leading comedian; a revival of *Yellow Sands* with Sir Cedric Hardwicke, Daphne du Maurier's *The Years Between*, a rather heavy-handed treatment of the Enoch Arden theme as applied to wartime; a piece called *No Medals* featuring Fay Compton; *Perchance to Dream*, another musical, starring Ivor Novello; *Lady from Edinburgh*, with Richard Bird and Sophie Stewart in the chief roles; *The Gay Pavilion*, with Mary Ellis; and a thriller, *The Shop at Sly Corner* in which Cathleen Nesbitt was the principal performer. In addition a number of American successes were imported, with varying fortunes. Thornton Wilder's *The Skin of Our Teeth* rather puzzled London, and Vivien Leigh was regarded as less effective in the part of Sabina than its American exponent, Tallulah Bankhead; *Arsenic and Old Lace* prospered with Lillian Braithwaite and Mary Jerrold as the placidly homicidal Brewster "girls"; the Franz Werfel-S. N. Behrman *Jacobowsky and the Colonel* created a less favorable impression than it had done in New York. Karel Stepanek and Michael Redgrave respectively filled the two title roles, with Rachel Kempson as the girl. *Tomorrow the World* proved nearly as gripping and *Three's a Family* quite as amusing as Americans had found them. Evelyn Laye was charming in *Three Waltzes*, and both Irwin Shaw's *The Assassin*, dealing with the Admiral Darlan incident, and Terence Rattigan's *While the Sun Shines* were received with greater favor than New York accorded them. *Chicken Every Sunday*, as presented by Firth Shepherd, was well liked, but the dramatization of *A Bell for Adano* failed to appeal to British audiences.

The annual Shakespeare Festival at Stratford comprised seven works of the Bard—*Much Ado*

About *Nothing*, *Antony and Cleopatra*, *The Merry Wives of Windsor*, *King Henry VIII*, *Twelfth Night*, *Romeo and Juliet*, and *Othello*, besides Goldsmith's *She Stoops to Conquer*. In the course of the six-month season the American actress, Clare Luce, contributed especially commendable portrayals of Beatrice and Cleopatra. Manchester, in midsummer, witnessed the premiere of Noel Coward's new revue, *Sigh No More*, and found it characteristic yet disappointingly below standard. Joyce Grenfell, Cyril Ritchard and Madge Elliott were the outstanding performers. Back in London *As You Like It* was given an open-air presentation in Regent's Park, and Ibsen's rarely played *Little Eyolf* was seen with Walter Hull and Lydia Sherwood in the leading roles. An important and highly successful July offering was Norman Ginsbury's *The First Gentleman*, an engrossing blend of comedy and tragedy with the Prince Regent who subsequently reigned briefly and in profligate fashion as George IV for its central figure. Robert Morley gave a brilliant rendering of this character, ably seconded by Wendy Hiller as his daughter, Charlotte, who, but for her untimely death, might have been England's queen in place of Victoria. The musical, *By Jupiter*, from America, scored a substantial hit, and Robert Donat seized an opportunity to do a new Lancashire comedy, *The Cure for Love*, by Walter Greenwood. The Old Vic company, again headed by Ralph Richardson and Laurence Olivier, opened their second season of repertory at the New Theater with a notable innovation in producing both Part I and Part II of Shakespeare's *King Henry IV* in quick succession. Mr. Richardson was revealed as an uncommonly distinguished Falstaff in both, while Mr. Olivier covered himself with glory by his portrayals of Hotspur in the former and Justice Shallow in the latter. To these were later added a no less memorable presentation of Sophocles' *Oedipus Rex*, in a new, concise version by W. B. Yeats, wherein Mr. Olivier added still further to his laurels. With it, as an afterpiece, Sheridan's *The Critic* was played, Mr. Olivier appearing as Mr. Puff. Late in the fall a new drama by James Bridie, *The Forrihan Reel*, was hailed as quite crazy but nevertheless highly entertaining.

Dublin, meantime, saw the new season at the Abbey Theater open with Brinsley MacNamara's *Marks and Mabel*, a sequel to his earlier *Look at the Heffernans* and no less rich in Irish character and humor. Many of the Abbey's well-known veterans were in the cast as well as several newcomers. The Gate Theater, on the other hand, had abandoned the native drama in favor of outstanding plays of authors from various lands, such as Ibsen's *Lady from the Sea*, in which Christopher Casson, son of Dame Sybil Thorndike, and Eve Watkinson took the chief parts. Later, still another Dublin playhouse tempted fate with *The Skin of Our Teeth*, which not only was taken seriously but gave rise to a controversy of conflicting opinions that, far from fostering interest in the piece, brought about its withdrawal at the end of the first week. The highlight of the Summer Festival at Killarney was Seamus White's *The Cardinal and the Crows*, to which the coveted trophy was awarded.

Paris welcomed a hit early in the year in *Une Jeune Fille Toute Simple*, by Andre Roussin, an actor, but, in the state of transition and general uncertainty in France, did very little toward developing new talent in either playwriting or acting.

Similarly, Moscow, despite both her traditional love for the drama and her reversion from propa-

gandist plays to those presented solely for entertainment, was stagnating insofar as any new experimental work of importance was concerned. Virtually no new native works came to light and there was very little acting of the high order formerly maintained by the Moscow Art Theater. But Russian and other classics, Shakespeare in particular, and contemporary dramas from other countries, among them Lillian Hellman's *Watch on the Rhine* and *The Little Foxes* from the United States, prospered exceedingly. So, likewise, did a revival of *Mademoiselle Nitish*, a musical item in a French setting.

RALPH W. CAREY.

TIBET. A dependency of China in central Asia. Area, 463,000 square miles; population variously estimated at from 700,000 to 6,000,000. Capital, Lhasa, 50,000 inhabitants. Lamaism, a development of Mahayana Buddhism, is the religion of the people. Chief occupations: agriculture, stock raising, wool spinning, and knitting. The principal minerals are gold, borax, and salt. There is a factory for the manufacture of army equipment, uniforms, coins, and paper money. Trade is carried on with China and India.

Civil and religious authority is vested in the Dalai Lama, acting through a Prime Minister appointed from among the principal Tibetan lamas. The latter is assisted by a grand council of four members. The 14th Dalai Lama is a Chinese peasant boy selected in 1939 as the reincarnation of the 13th Dalai Lama who died in 1933. Enthroned Feb. 22, 1940 (see YEAR BOOK for 1940), he took the name of Jampel Ngawang Lobsang Yishey Tenzing Gyatso. During his minority, supreme power remains in the hands of the regent who assumed control when the 13th Dalai Lama died.

TIN. The United States continued to live on short tin rations in 1945, supplementing its meager diet with imports and reclaimed scrap, and eagerly eyeing the possibility of getting back to its big prewar resources in Malaya, the Netherlands East Indies, Siam, and possibly China.

When war cut off its access to the Far East, the United States had accumulated a stock of 157,227 long tons of tin in ore, concentrates and pig tin, the largest in its history. Since, imports never have equalled highly restricted consumption, this stock dwindled to 60,000 long tons, taking into account all supplies. Tin was carefully doled out and uses limited under War Production Board (formerly Office of Production Management, recently Civilian Production Administration) Order M-43. Consumption, including secondary tin, in 1941 was 135,789 long tons; in 1942, 86,096 long tons; in 1943, 81,840 long tons; in 1944, 90,352 long tons; and in 1945, 92,000 long tons. During the war period, from 32 to 40 percent was used in the production of brass and bronze, employed heavily in munitions manufacture, with an equal or somewhat smaller amount consumed in producing tinsplate and terneplate. During immediate prewar years, tinsplate and terneplate manufacture required approximately twice as large a quantity, and solder slightly more, than brass and bronze. On Nov. 19, the use of tin cans was eased to permit packing of 190 types of products instead of 139, and on Dec. 17 very slight relaxation was made in other permissible tin uses. Unless tin is more rapidly available from the Far East than appears probable, the Government stated that continued restrictions may be expected. Were restrictions lifted, consumption in 1946 might be estimated to

reach 120,000 tons because of increasing maintenance and reconversion requirements.

Imports during the war period comprised principally (1) concentrates from Bolivia at an annual rate of about 20,000 long tons, with the exception of 1944 when 28,730 long tons, and 1945 when 32,550 long tons, were imported; and (2) pig tin and some concentrates from Belgian Congo totaling 11,224 tons in 1942, 15,646 in 1943, 17,549 in 1944, and a probable 13,650 long tons in 1945. China was able to contribute 3,338 long tons in 1944 and 1946 in the January-June, 1945, period. Inconsequential amounts came from Argentina, French Cameroons, Mexico, and Portugal, and less than 10 tons a year from domestic mines.

Low and medium grade Bolivian concentrates were blended with high grade material from Belgian Congo and some from the French Cameroons to feed the Government owned tin smelter at Texas City, Tex., which furnishes high grade metal. Built to meet war needs, this smelter produced 15,695 long tons of metal in nine months of operation in 1942; 20,727 in 1943; 30,619 in 1944; and close to 41,000 in 1945.

Production of secondary tin from scrap was helped along by collection of tin cans from householders, which ceased, except for very large users, on Oct. 12. Secondary tin production ranged from 25,000 to 28,000 long tons during the war period.

Although many of the mines and smelters in the Far East were found at least partially intact after the Japanese eviction, necessity of assembling crews, repairing and replacing equipment, and providing supplies is expected to prevent production of consequence until mid-1946, and full scale production until mid-1947 or 1948.

C. T. Post.

TOGO, French. The part of Togo mandated to France by the League of Nations. Area, 21,893 square miles. Population (1938), 780,497. Capital: Lomé (14,380 inhabitants). The main products are cocoa, palm oil, copra, coffee, and cotton. Trade (1939): imports 91,644,000 francs; exports 74,227,000 francs (franc averaged \$0.0251 in 1939). Budget (1939): 50,534,000 francs; in addition, the railway budget was 12,889,000 francs. Railways (1940): 242 miles. Shipping (1938): 386 ships cleared the ports of Lomé and Anecho.

TOKELAU (Union Islands). A group of islands (Faka-ofu, Nukunono, Atafu) in the Pacific (8° to 10° S. and 171° to 173° W.), formerly part of the Gilbert and Ellice Islands colony, transferred to the jurisdiction of New Zealand on Feb. 11, 1926. Area: 4 square miles. Estimated population (June, 1942), 1,364. The Government was under supervision of the administrator of Western Samoa.

TRACK AND FIELD ATHLETICS. With most of this country's great stars in the service, interest in track and field dipped to its wartime low last year. The sport turned in a number of surprises early in the indoor season when Gunder Haegg, famed Swedish runner, paid his second visit here and suffered a series of reverses. Gunder the Wonder, who had raced all opposition into the ground on his 1944 trip, was unable to get into condition and won only one mile event, that in Cleveland when he defeated Forest Efav in 4:16.7.

However, his losses in the United States were no indication that the Flying Fireman was slipping, for Haegg and Haakan Lidman, the noted hurdler who accompanied him, had to overcome all kinds of hardships before reaching this country, the trip

requiring a full month. Later in the year, at home in Sweden, Haegg whipped back into condition and regained his prestige when he ran a mile in 4:01.4 for a new world record, beating his old rival Arne Andersson, holder of the listed mark of 4:02.4.

The big story of track broke quite late in the year when the Swedish Athletic Association brought professional charges against Haegg, Andersson and thirteen other native stars. Lennart Strand, a newcomer who beat Andersson in the Swedish national 1,500-meter run last Summer and later outlegged both Haegg and Andersson in the mile, was not listed among the accused athletes. Late in March, 1946, the Swedish A.A. ruled Haegg and Andersson out of amateur competition for life, but allowed their marks to stand in Swedish record books. Seven others of the accused athletes drew lighter penalties.

With the mile event still the blue-ribbon classic of foot racing despite the absence of the former headliners, little Jimmy Rafferty of the New York A.C. was America's standout. Rafferty, formerly an 880 man, captured seven consecutive mile tests. His best effort came in the Millrose A.A. meet when he was clocked in 4:13.1.

Gil Dodds, who dominated the indoor mile events the previous season, took part in only one meet, racing to a triumph in a two-mile race at the Boston Y.M.C.A. games before announcing his retirement for a preaching career.

Lidman, who had a little more luck than Haegg on their journey to the States, winning several times, proved his mettle in a meet at Camp Endicott in Rhode Island where he skimmed over the high barriers to set a new world indoor standard of 0:14.4 for 110 meters.

The National Amateur Athletic Union outdoor championships, held at Randalls Island in New York, lacked the color of other years, but proved interesting from a competitive standpoint. The games marked one of the few defeats suffered by Rafferty in 1945 when the Winged Foot ace ran a bad sixth in the 1,500-meter grind. Roland Sink, Navy trainee at Harvard, easily captured the event. Bob Kelley of Illinois and Dr. Arky Erwin of New Orleans were the only defending champions in the track competition and both were successful, Kelley keeping his 800-meter crown with a 10-yard victory and Erwin scoring easily in the 400-meter hurdles. In the field events, only the veteran Henry Dreyer of the New York A.C. was able to repeat, winning the hammer throw. Hank gained distinction as the meet's only double victor when he took the 56-pound weight throw. The New York A.C. retained team honors, just as it had done in the A.A.U. indoor games. Dreyer also repeated in the 35-pound weight throw indoors.

Barney Ewell of Camp Kilmer, N. J., was among the season's consistent scorers. After capturing honors in the 60-yard sprint and running broad jump in the national A.A.U. Winter meet, Ewell triumphed at 100 meters on Randalls Island.

A powerful Naval Academy squad retained its I.C.4-A championship outdoors, rolling up a record 85½ points to defeat Army, which finished second ahead of N.Y.U. John B. Van Velzer, the best sprinter in intercollegiate circles during the year, gained the only double, taking the 100 and 220 to help the Middies amass their total. The strong Annapolis team added to its prestige when it traveled to Milwaukee in June and brought the National Collegiate Athletic Association championship East for the first time in the 24-year-old history of the games. Van Velzer annexed only the 100 in that meet, but Navy placed enough men to roll up

TABLE I—U.S. EXPORTS: * 1945 AND 1944
[In thousands of dollars; adjusted to nearest thousand]

Month	Total exports ^b		Lend-Lease		% Lend-Lease		Not Lend-Lease	
	1945	1944	1945	1944	1945	1944	1945 ^a	1944
Jan.	\$ 902,840	\$1,123,935	\$651,115	\$ 923,844	72	82	\$251,725	\$200,091
Feb.	886,613	1,106,527	664,724	900,313	75	81	221,889	206,214
Mar.	1,030,089	1,197,001	731,557	950,926	71	79	298,502	246,075
Apr.	1,005,355	1,230,834	703,115	991,165	70	81	302,240	239,669
May	1,135,486	1,455,275	790,293	1,192,856	70	82	345,193	262,419
June	870,282	1,295,975	532,561	1,036,357	61	80	337,721	259,618
July	893,150	1,196,667	538,818	935,885	60	78	354,332	260,782
Aug.	737,898	1,190,450	413,398	931,044	56	78	324,000	259,406
Sept.	514,351	1,192,742	158,484	955,257	31	80	355,867	237,485
Oct.	455,284	1,143,756	74,850	806,716	16	78	380,414	247,040
Nov.	638,937	1,185,934	115,260	903,269	18	76	523,687	282,665
Dec.	736,139	938,180	187,488	687,796	25	73	548,701	250,384
Total	9,805,875	14,257,277	5,561,604	11,305,430	57	79	4,244,271	2,951,847

* Excluding shipments to the U.S. armed forces, shipments between Continental U.S. and the Territories and possessions, and shipments between the Territories and possessions. ^b Including reexports and Lend-Lease. ^a Includes shipments made under the United Nations Relief and Rehabilitation Program.

62 points and dethrone Illinois, which was second with 57%.

Army again won the I.C.4-A crown indoors, with 73½ points to 55½ for Navy, both teams passing the old scoring mark for the games. Van Velzer added the 60-yard dash title to his growing collection in that meet.

Tuskegee Institute won team honors in the women's national A.A.U. indoor and outdoor meets. Miss Alice Coachman, top scorer of the champions, annexed the 50 and 100-meter sprints and the high jump outdoors. Miss Stella Walsh, Olympics ace from Cleveland, was a double victor, capturing the 200-meter dash and the broad jump. Miss Walsh, who holds some 60 world marks for women, cut her universal 100-meter standard to 0:11.2 in June. Competing in the Northeastern Ohio A.A.U. championships at Cleveland, she beat her recognized standard by three-tenths of a second.

Track and field proved one of the most popular sports among our service men overseas and with the defeat of Germany a number of really colorful events were put on. The late Gen. George S. Patton, Jr., saw the first big meet, which was held at Nuremberg. Later, American, British and French troops staged a "Little Olympics" before 15,000 in the Berlin Olympic stadium. Sgt. Edward J. Walsh, former Manhattan College star, helped the Americans roll up the top total of 94 points by winning the 1,500-meter run and racing with the victorious medley relay four.

The Fifth Army forces annexed the title in the Mediterranean area, but lost to the ETO squad by a score of 69 to 54 later at Frankfort-on-Main in Germany.

THOMAS V. HANEY.

TRADE, Foreign. The foreign trade of the United States during the full 12 months of 1945 showed a marked decline in value when compared with the returns of foreign trade for the same period of 1944.

Exports. Total value of all exports of domestic and foreign merchandise, including Lend-Lease exports, for the 12 months of 1945 amounted to \$9,805,875,000, as compared with \$14,257,277,000 for the same months of 1944. Lend-Lease exports represented 57 percent of the total exports for the 12-month period of 1945 and 79 percent for the like period of 1944. Monthly export totals for 1945 and 1944 are presented in Table I. The total shipping weight of exports for the January to the end of December of 1945 was 187,398 million pounds, as compared with 187,090 million pounds for same period of 1944.

Imports. General imports into the United States

during the 12-month period, January to December, were valued at \$4,135,992,000 for 1945 and \$3,920,612,000 for the same period of 1944. The total shipping weight of imports into the United States for the 12 months was 122,346 million pounds for 1945 and 119,307 million pounds for the equivalent months of 1944. Monthly returns of United States imports are presented in Table II.

TABLE II—U.S. IMPORTS: 1945 AND 1944
[In thousands of dollars; adjusted to nearest thousand]

Month	General imports * (arrivals)		Imports for consumption ^b	
	1945	1944	1945	1944
Jan.	\$333,878	\$300,847	\$355,158	\$305,295
Feb.	325,466	314,261	331,382	305,735
Mar.	364,791	358,639	365,760	357,380
Apr.	366,124	361,348	355,973	357,479
May	372,130	386,339	362,080	372,695
June	359,555	331,582	338,838	323,381
July	355,698	204,273	345,629	289,804
Aug.	359,655	303,678	354,983	298,464
Sept.	334,673	281,540	329,271	279,363
Oct.	344,416	328,641	343,714	331,602
Nov.	322,419	323,435	312,565	325,176
Dec.	297,187	336,029	279,478	332,708
Total	4,135,992	3,920,612	4,074,020	3,879,118

* General imports include entries for immediate consumption and entries into bonded warehouses. ^b Imports for consumption include entries for immediate consumption and withdrawals from bonded customs warehouses for consumption.

TRANS-JORDAN. An Arab territory lying east of Palestine and south of Syria. Together with Palestine it was turned over to Great Britain as a Class A Mandate on Sept. 29, 1923. Area, 34,700 square miles. Capital, Amman.

Government. Originally Trans-Jordan was administered as part of the Palestine Mandate. However, the stipulations concerning Jewish immigration were not to apply to Trans-Jordan, which is thus closed to Zionist colonization. An autonomous Arab administration was recognized under the Emir Abdullah (son of the late King Hussein of the Hejaz) whose government must operate within the framework of the mandate. The High Commissioner for Palestine holds the same office for Trans-Jordan, and is represented in Amman by a British Resident. The Emir is assisted by a Council of Ministers and a Legislative Assembly. The defense of the country is entrusted to the Trans-Jordan Frontier Force and the Arab Legion.

Events, 1945. Trans-Jordan did not figure prominently in the news during 1945. The Emir Abdullah continued, as before, to oppose the creation of a Jewish state in Palestine. On Dec. 29, 1944, he declared that he would actively resist further Jewish immigration into the Holy Land and warned that



LAURETTE TAYLOR, AS THE MOTHER
in the New York Drama Critics'



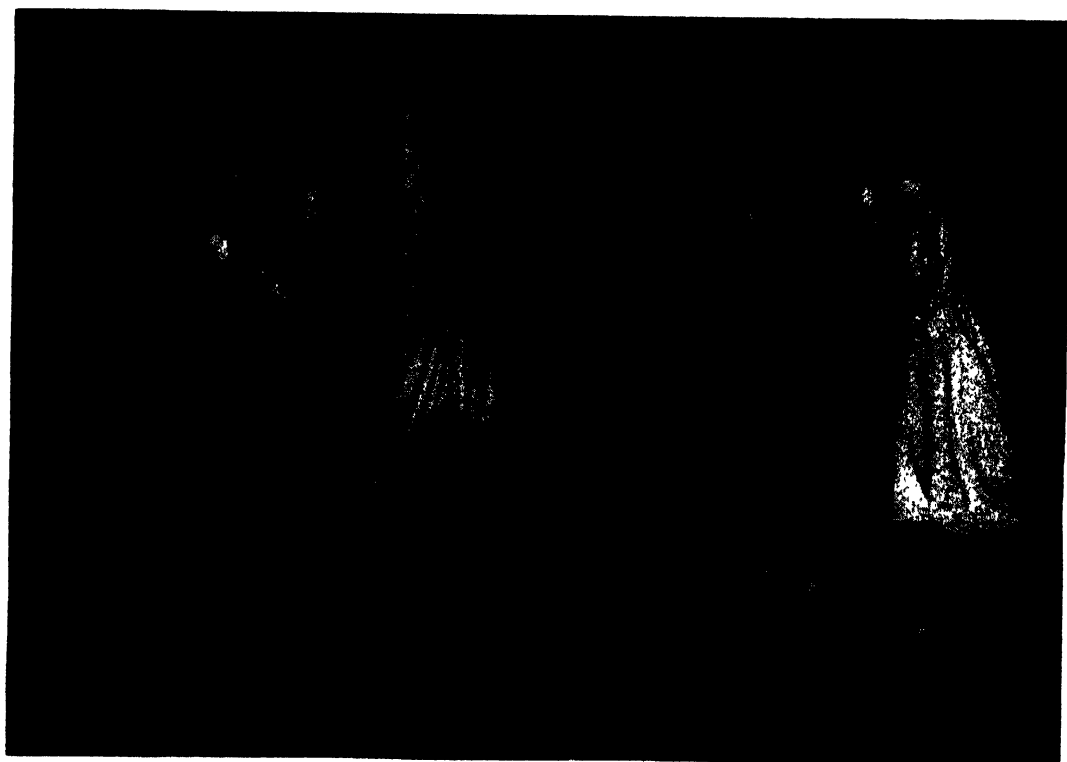
AND JULIE HAYDON AND ANTHONY ROSS
"Best Play," *The Glass Menagerie*.



SCENE IN CAROUSEL, MUSICAL VERSION OF LILIAM

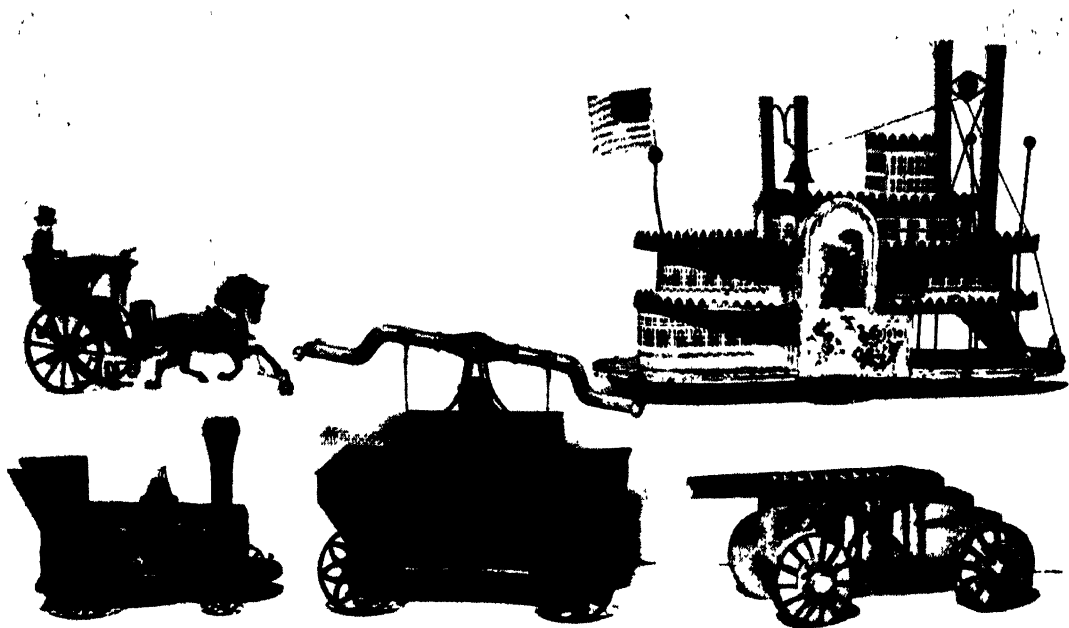


DOLLS FOR DISPLAYING NEW FASHIONS A CENTURY AGO



PUPPET THEATRE OPENING IN PARIS SHOWED FRENCH TASTE STILL REIGNED SUPREME

Robert Lacoste, Minister of Industrial Production, presides at the official opening at the Pavillon de Marsan. (French Press and Inf. Service)



TRANSPORTATION IN MINIATURE



TOYS THAT ENTERTAINED OUR GREAT-GRANDPARENTS

from an exhibition at New York Historical Society

trouble would be inevitable if Britain withdrew from that country or failed to uphold the policy laid down in the White Paper of 1939. Late in July leaders of four of the six Arab parties in Palestine met with the Emir in Amman, in an effort to re-establish the Arab Higher Committee which had been suppressed by the British before the war. The Emir even suggested that the chairmanship of the recreated body be given to his old political foe, the Grand Mufti of Jerusalem. However, the latter had been handed over to the Allies by the Swiss Government and there was no indication that he would be allowed to return. On Oct. 22 Abdullah declared that the situation was obviously deteriorating and reminded the outside Powers that Palestine belonged to the whole Arab world.

For a number of years Abdullah had been proposing the creation of a Greater Syria, consisting of Trans-Jordan, Palestine, Lebanon, and Syria—of which he would be the ruler. For this reason he was thought to have given only lip service to the ideal of Pan Arabia. When Ibn Saud definitely came out for the latter in January, Abdullah, Ibn Saud's old rival, was reported to be even less enthusiastic about the Pan Arab movement. However, Trans-Jordan was represented at the Cairo Conferences which created the Arab League and has pursued a policy of solidarity with it since its creation.

Not being an independent state, Trans-Jordan could not be invited to San Francisco. There were indications, however, that in the near future Britain might take positive steps to confer real independence upon the country.

The People. The population is around 400,000, almost exclusively Arab. Many are nomads, for there are few towns and no large cities in the country. The people are Moslem except for some 50,000 Christians. Before the war there were 191 schools with 13,854 pupils.

The Economy. Most of the area is desert or semi-desert. Only in the western part is agriculture possible, and even there it is precarious. Irrigation could work wonders on the country's productivity but few sources from which water could be obtained are available. In 1942 record crops of 200,000 tons of wheat and 100,000 tons of barley were reported. The terrain and climate are adapted to raising sheep and goats.

There is very little international trade in or out of the country. The Hejaz Railway runs through Amman as far south as Ma'an, beyond which point it has been abandoned. Under the mandatory regime several modern highways have been constructed, notably one connecting Palestine with Iraq.

ROBERT GALE WOOLBERT.

TREASURY, U.S. Department of the. A Department of the U.S. Government which was composed in 1945 of the following principal branches.

- Bureau of the Comptroller of the Currency
- Bureau of Customs
- Bureau of Engraving and Printing
- Bureau of Internal Revenue
- Bureau of the Mint
- Bureau of Narcotics (see NARCOTIC DRUGS CONTROL)
- Committee on Practice
- Division of Monetary Research
- Division of Personnel
- Division of Research and Statistics
- Division of Tax Research
- Legal Division
- Office of the Chief Clerk
- Fiscal Service
- War Finance Division
- Foreign Funds Control
- Office of Superintendent of Treasury Buildings
- Procurement Division
- U.S. Secret Service
- Office of the Tax
- Legislative Counsel

The Secretary of the Treasury in 1945 was Fred M. Vinson; Under Secretary, Daniel W. Bell. See the separate listing of important bureaus; **BANKS AND BANKING**; **FINANCIAL REVIEW**; **PUBLIC FINANCE**; **TAXATION**; **SILVER**.

TRUK. A former Japanese naval base in the west central Pacific, comprising a cluster of islands (151° 22' E. and 6° 57' N.) in a lagoon surrounded by coral reefs (32 miles across from east to west), in the eastern Caroline group of the mandated Japanese Pacific Islands (q.v.). Area, 51 square miles. Civil population (1938), 17,133. There are 245 islands in all, the chief being Dublon (3 miles long), Fefan, Moen, Tol, Udot, and Uman. The islands, of volcanic and coral formation, are for the most part high, and offer good protection and safe anchorages for ships. Truk passed under the control of Allied armed forces following the surrender of Japan in 1945.

TUNNELS. With peace established and men and materials once more available there are several tunnel projects ready for starting or renewal of construction. A number of these are included in current water supply and irrigation projects. New machines and methods have expedited the rate of advance and further improvements are to be expected. One new idea is welding instead of bolting the joints in steel-plate lining, thus making the lining watertight. Projects for tunnels of extreme length are headed by those for bringing Colorado River water to irrigate the elevated plateau of Arizona, where alternative routes require 139 or 72 miles of tunnel. The lengths of individual tunnels to make up these figures are not yet determined. There is also a project for a 30-mile tunnel through the Cascade Mountains for highway communication between two sections of the Pacific State of Washington.

To bring water from the Pacific slope for irrigation of the eastern slope of the Rocky Mountains, the 13-mile Continental Divide tunnel (halted in January) was resumed in May, for expected completion in May, 1946. It will be 9 ft. 9 in. in diameter. A similar but longer project, to bring water from the Pacific slope for the domestic supply of Denver, Colo., includes a 23-mile tunnel through the Divide. It will be 9 ft. in diameter. A pilot or exploratory bore 6½ x 7½ ft. has been completed for 386 ft., driven at the crown of the future larger tunnel. As part of the new Delaware River water supply for New York City, a 26-mile tunnel may be driven to tap the East Branch, supplementing the 83-mile main tunnel, already completed. The tunnel being driven by the U. S. Bureau of Mines to drain mines in the Leadville district of Colorado (now halted by lack of funds) has been completed for 6,600 ft. out of a total of 17,300 ft., including two branches of 3,400 and 2,400 ft. It is 9 ft. wide and 10½ ft. high, with its portal at Elev. 9,957.

The north tube of the Lincoln Tunnel under the Hudson River at New York was opened February 1. The Brooklyn-Staten Island tunnel will be begun as soon as its financing can be arranged, and its construction will take about five years. Work on the Battery-Brooklyn tunnel (20 per cent completed) was resumed in November and may be completed in three years. It was started in 1941 but halted in 1942. At Houston, Texas, two highway tunnels under the Ship Canal are proposed, financed by a bond issue of \$5,000,000 by the Houston Navigation District. Galveston has a similar project for communication with the main-

land. Boston may duplicate the present harbor tunnel to East Boston, owing to increasing traffic. At Norfolk, Va., a submarine tunnel is planned to connect with Portsmouth. At San Francisco, Broadway is to be extended through Russian Hill by a tunnel 2,014 ft. long, having twin concrete tubes each with a 22-ft. road and 5-ft. walk. The Penn-Lincoln Parkway in Pennsylvania will pass through the Squirrel Hill section of Pittsburgh by twin two-lane tunnels a mile in length. Ventilation for removal of carbon monoxide gas in highway tunnels is considered necessary for even short tunnels, and at Washington, D. C., a grade separation subway 225 ft. long has fans for this purpose, the fans start to operate only when the air becomes foul.

Railroad tunneling has been mainly on improvement work. The new Tennessee Pass tunnel of the Denver & Rio Grande Western, 2,500 ft., was opened in November. It is for a single track, but the old tunnel will now be enlarged to take modern locomotives and cars. On the Baltimore & Ohio, 528 ft. of the old brick roof lining in the Kingswood tunnel was replaced with concrete. On account of heavy war traffic this work was done from above, by a shaft sunk to the tunnel. The Southern Pacific Railroad has enlarged a number of its old tunnels and has replaced some of the others with open cuts.

Curiosities in tunnel work include an inspection tunnel and gallery at Niagara Falls, opened to the public on August 4. Revealed after the war, a 2,500 ft. tunnel was built as an air-raid shelter at the Naval Station at Bremerton, Wash. Its main stretch is 1,650 ft., with four branches of 125 to 160 ft., one of arch section, 18 ft. wide and 12 ft. high. On the South Pacific islands the U. S. forces found tunnels 50 ft. underground driven by the Japanese for use as barracks and workshops, approached by steps or ramps. With the end of the war and the change in political and national affairs in Europe, the old but hardy perennial project for a tunnel between England and France has again been brought into the light. See AQUEDUCTS, WATER SUPPLY.

E. E. RUSSELL TRATMAN.

TURKEY. A republic comprising Asia Minor and a narrow zone in Europe along the Straits, as well as Imbros, Tenedos and the Rabbit Islands in the Aegean Sea. Area, 296,107 square miles. Capital, Ankara (Angora).

Government. The Constitution of Jan. 20, 1921, as amended in 1924 and 1934, confers both executive and legislative power on the Grand National Assembly, or *Kamutay*. This body is elected every four years by universal indirect male and female suffrage, and consists of 455 deputies. The constitutional law provides that "the Assembly exercise the executive power through the President of the Republic elected by itself and through the Council of Ministers chosen by him." The Assembly is nominally vested with power to control the acts of the Government and even to dismiss it. In reality, under both the first President, Kemal Ataturk, and the present incumbent, Ismet Inonu, there has been what amounts to a presidential dictatorship. All members of the Assembly belong to the Republican People's (or Popular) Party.

The reforms of Ataturk included a thorough revision of the judicial and legal systems. The new civil code was almost identical with that of Switzerland, the new Penal Code was largely based on that of Italy, and the Commercial Code on that of Germany.

The Turkish budget showed a steady rise in both revenue and expenditures during the war years. From £T550,209,000 revenue grew to £T901,511,000 in 1944-5 (estimated). In the latter year, ordinary expenditures were estimated at £T570,434,417 and extraordinary expenditures (mostly for defense) at £T382,000,000. The national debt also rose during these years until it was believed to be around £T1,300,000,000 by 1945.

Military service is compulsory and normally about one-half of the men liable actually serve. Following the outbreak of World War II, the precarious position of Turkish neutrality required that the army be considerably increased and that attempts be made to acquire more modern equipment, which Turkey herself does not manufacture. Some of her requirements were met by shipments of British and American arms. The Turkish Navy comprises the former German cruiser *Goeben* (rebuilt and now called the *Yavuz*) of 23,100 tons, two small and old cruisers, and various subsidiary vessels. The air force is equipped with foreign planes, chiefly German, British and American. Altogether Turkey's defense forces are, despite the absence of much necessary modern equipment, an important element in Near East politics and could, if called upon, give a good account of themselves. The Anatolian peasant has long enjoyed the reputation of making an excellent soldier, especially when on the defensive in his own hills.

Events, 1945. Economic Affairs. When Turkey broke off diplomatic relations with Germany in Aug. 1944 (see YEAR BOOK for 1944, p. 632), she inevitably disrupted her whole trade structure. Germany and the Allies had been competing for Turkish supplies, thus raising prices far above the world level. With the disappearance of the German buyers the British and Americans found it no longer necessary to engage in preemptive purchases. After V-E Day Turkey confronted the fact that the wartime era of high prices for exports was over. In fact, as early as February Prime Minister Sarajoglu was lamenting that the virtual standstill in Turkish foreign trade had resulted in marked decreases in customs duties, export taxes and other revenues.

During the latter stages of the war American goods had to a considerable extent displaced British products in the Turkish market—e.g. cotton goods, steel and iron products—due to Britain's inability to manufacture for the export trade. At the same time, British traders enjoyed a certain preferential position because of the operation of the "sterling bloc." In order to prepare for the re-establishment of commercial relations on a peace-time footing, the Turkish and British Governments entered into a trade agreement, signed in London on May 4.

During the year extensive plans were made to modernize and expand Turkey's industrial plant and communications facilities. For example, a factory to produce De Havilland airplane engines was projected near Ankara. Railway equipment and other machinery was purchased in Britain. Negotiations for the construction of several merchant ships were carried on with Canada. To replace the oil products that formerly came from Rumania, Turkey inquired into the possibilities of obtaining her supplies from the nearby fields in Iraq. Late in July the construction of a new and modern port was begun at Eregli on the Black Sea, which when completed would provide a convenient outlet for the coal mined in the Zonguldak area. The tax on exports, which amounted to some 10 per cent by the end of the war, was removed, and after V-J Day other concrete steps were taken to get Turkey's

foreign trade flowing once again, particularly within the sterling bloc.

Late in December the Minister of Finance presented the 1946 budget to the National Assembly, which showed estimated revenues of £T894,668,000 and estimated expenditures of £T990,572,884. The deficit was to be covered by short-term credits, treasury bonds and long-term internal loans. One of the heavy drains on the Government's resources was the standing army of a million men still kept on a war footing. He expressed confidence that the danger of inflation was past and revealed that during the next few years Turkey planned to spend some £T900,000,000 on the purchase of machinery and equipment.

Domestic Politics and Social Reform. During the year there were several indications that the monopoly of the People's Party over Turkish political life might be broken, or voluntarily dissolved. On May 19 President Inonu declared, on the occasion of the twenty-sixth anniversary of Ataturk's landing in Anatolia, that in the near future democratic principles would receive wider application in the country's intellectual and political life. General dissatisfaction with the one-party set-up had by then become widespread. In July legal steps were taken to found a new political group called the "National Regeneration Party."

President Inonu opened the new session of the National Assembly on Nov. 1 with a significant speech reiterating his previous promise to effect certain reforms. In particular he stated that the law on the press and associations would be liberalized, and that the coming elections of 1947 would be held with a direct and secret ballot. In the past members of the National Assembly had been indirectly elected by "colleges of electors" who in turn were chosen by the primary voters. This method of election had helped assure the monopoly of the People's Party. In December former Prime Minister Jela Bayar announced the formation of a party dedicated to Kemalist doctrines and policies but differing in its interpretation of these from that of the official party. Meanwhile there had emerged three new left-wing newspapers, one daily and two weeklies. Many Turks were anxious lest this new liberal policy might open the door to Soviet-sponsored parties, such as the Tudeh in Iran.

A far-reaching social reform was enacted by the National Assembly when it passed the Land Reform Bill in June. Under the terms of this act large estates were to be broken up into smaller lots varying from twelve to 1,200 acres, depending on the nature and location of the land. Owners of expropriated land were to be amply reimbursed with government bonds. It was estimated that a million families, or one-third of the rural population of the country, would benefit—families which hitherto had relied on share-cropping or day labor for their livelihood. In order to carry these and other reforms into effect the Government created an independent Ministry of Labor.

Turkey Enters the War. In compliance with requests from Britain and the United States, Turkey broke off diplomatic relations with Japan on Jan. 4. At the same time the process of driving the Nazis out of the Balkans had reached the point, despite the presence of a few hold-out Axis garrisons on certain Aegean islands, where the Allies could use the Straits. This meant that material for Russia could now follow a short, all-water route direct to Soviet ports, thus eliminating the roundabout route via the Persian Gulf and the Trans-Iranian Railway (see IRAN).

At the Yalta Conference in February the Big

Three had made it plain that neutral states desiring to attend the San Francisco Conference of the United Nations must present, as the price of admission, a declaration of war against Germany and Japan before Mar. 1. On Feb. 23 the National Assembly unanimously voted to declare war on the two Axis Powers. On the very same day Foreign Minister Saka and United States Ambassador Steinhardt signed a lend-lease agreement. Turkey's declaration of war had little military significance, for by then the Germans were retreating northwestward through Hungary. Turkey's armed forces thus did not participate in the conflict. The Turkish Ambassador in Washington signed the United Nations Declaration on Feb. 28.

The Straits Question Revived. In March it was learned that the Soviet Union had denounced its 1925 treaty of friendship, neutrality and non-aggression with Turkey as being no longer in accord with existing conditions. It was universally assumed that one of the things Russia hoped to accomplish by this move was a revision of the regime of the Straits. However, this matter was regulated by the Convention of Montreux (1936) to which some eight states were signatories and which could hence be altered only by similar multilateral action. Some observers felt that the Soviet's action was ultimately aimed not so much at Turkey as at Britain, who had always been averse to Russian control over the Straits.

The Turkish Government agreed that a revision of the treaty with Russia was opportune and awaited the Soviet's suggestions. These were said to have been delivered in Ankara in late June, and were reported in the London *Times* of June 28, 1945, as containing four demands: "(1) the retrocession to Russia of the Turkish districts of Kars and Ardahan; (2) the granting to Russia of bases in the Straits, enabling her to defend them in common with Turkey; (3) the revision of the Montreux Convention on the Straits; and (4) the acceptance by Turkey of certain changes in the Balkans in favour of some of the smaller States."

This turn of events led Foreign Minister Saka to stop in London en route home from San Francisco and confer with Foreign Secretary Eden. The Turks evidently hoped for support from the British and American delegations at the Potsdam meeting, where the Straits issue figured prominently on the agenda. However, the Potsdam statement was silent about Turkish matters, and this naturally disappointed the Turks. Nevertheless the Straits problem was discussed there, with the United States favoring internationalization and the Russians reportedly rejecting it. Turkey was known to be willing to accept internationalization if it did not involve any loss of her sovereignty or endanger her security.

The Straits were not discussed at the Council of Foreign Ministers held in London during late September and early October. In revealing this fact on Oct. 10, Secretary of State Byrnes nevertheless acknowledged that at Potsdam President Truman, Prime Minister Churchill and Premier Stalin had secretly agreed to have their governments negotiate separately with Turkey concerning the question. The American proposals for revising the Montreux Convention were said by Mr. Byrnes on Nov. 7 to embody the following principles: (1) The Straits to be opened to the merchant vessels of all nations at all times; (2) the Straits to be opened to the transit of the warships of Black Sea powers at all times; (3) except for an agreed limited tonnage in times of peace, passage through the Straits to be denied to the warships

of non-Black Sea powers at all times except with the specific consent of the Black Sea powers, or except when acting under the authority of the United Nations; (4) Certain changes to modernize the Montreux Convention, such as the substitution of the United Nations Organization for the League of Nations and the elimination of Japan as a signatory.

Widening Rift with Russia. The closing weeks of the year saw relations with the Soviet Union become steadily more strained. The treaty of friendship, neutrality and non-aggression, which Moscow had denounced in March, expired on Nov. 7 without a new treaty having been negotiated to take its place.

On Dec. 4 university students in Istanbul staged riotous demonstrations during which the premises of two left-wing newspapers and a bookshop owned by a Soviet citizen were damaged. In reply to pointed Russian protests, the Turkish authorities denied that the outbreak in any way had governmental approval, or that it was anti-Russian in aim. An official Turkish note expressing this denial was rejected by the Soviet Government.

Meanwhile the Turks were becoming alarmed at Russia's intervention in the Iranian Province of Azerbaijan (see IRAN) and at her support of Armenian nationalist agitation for the incorporation of northeast Turkey into the Armenian Soviet Republic. At the moment the Big Three were assembling in Moscow on Dec. 20 a letter by two members of the Georgian Academy of Science, printed in the principal Soviet newspapers, demanded that Turkey cede a considerable area adjoining the Russian Caucasus. According to this letter, the area in question stretched 180 miles west of Batum along the Black Sea coast of Turkey and as deep as 75 miles—thus including the important city of Trebizond. The letter charged that this region had been taken from Georgia in the sixteenth century, and pointed out that the Kars and Ardahan districts had been in Russian possession as late as 1921.

These demands, which were assumed to have official support, created a first-class diplomatic storm that hung heavily over Russo-Turkish relations at the end of the year. The Turks of course indignantly denied the Soviet claims and clearly indicated that they would go to war rather than surrender any of the disputed zone. Foreign observers were strongly inclined to regard Russia's "war of nerves" on Turkey as merely part of a wider plan to create buffer areas around the strategically vital Caucasus oil fields—in line with the analogous Soviet policy of supporting buffer states in eastern and southeastern Europe.

Characteristics of the Population. The population on Oct. 20, 1940, was 17,820,950, of which 1,516,005 lived in European Turkey. The rate of increase is high, so that by the end of 1945 there were probably some nineteen and a half million inhabitants in the country. The principal cities, with their 1940 populations are: Istanbul, 793,949; Izmir (Smyrna) 183,762; Ankara, 157,242; Adana, 88,119. Turkey is preeminently a rural country. After World War I she was deprived of almost all areas inhabited by non-Turkish elements, so that only a few national or religious minorities still remain within the country. These are chiefly Greeks, Armenians, Kurds and Circassians. Islam was disestablished as the state religion shortly after the First World War, but most Turks still profess it as their religion. The 1935 census provided the following figures: Moslems, 15,838,673; Orthodox, 125,046; Jews, 78,730; Georgians, 44,526; and Roman Catholics, 32,155.

The educational system has been thoroughly reformed under the Republic. Primary education is nominally compulsory for both boys and girls. Education at all levels is under the supervision of the Ministry of Public Instruction, even that given in the schools of the non-Moslem communities. In 1941 there were 10,948 primary schools; 252 secondary schools; 193 lycées, normal and professional schools; and 20 institutions of higher learning. Among the latter are the State University of Istanbul and Robert College, an American-founded institution near that city. The use of the Latin alphabet was made compulsory in 1929.

The Country and Its Economy. Agriculture provides the means of livelihood for two-thirds of the Turkish people. The soil is generally fertile, but rainfall is often deficient and methods are primitive. Nonetheless rapid strides have been made in recent years to improve agricultural techniques and apparatus. The construction of new highways, railroads and factories has aided in the program of modernizing Turkish farm life.

The principal crops are indicated by the following statistics for 1942: wheat—4,369,455 hectares, 2,000,105 metric tons; barley—1,931,576 hectares, 902,095 metric tons; maize—631,132 hectares, 360,019 metric tons; cotton—326,687 hectares, 212,694 metric tons; tobacco—198,880 acres, 68,942,000 kilograms. Other large products are oats, silk, opium, figs, olives and olive oil. In 1943 the animal population was: 16,124,884 sheep, 11,815,622 goats, 7,170,930 cattle, 1,217,997 donkeys, 716,327 horses and 649,712 buffaloes. Wool and goat hair are among the country's chief exports. Unlike the other countries of the Near East, Turkey possesses valuable forest resources—some 23,000,000 acres, of which the state owns 88 per cent.

Turkey is also rich in minerals, most of them little exploited. Production figures in metric tons for 1942 were: coal, 2,509,614; lignite, 388,825; chrome, 130,053; cement, 210,853. Experts believe that the future of Turkey's mining industry is bright, particularly since it has the wholehearted support of the Government.

The state has also, since the inauguration of the first five-year plan in 1934, pushed a program of rapid industrialization. Typical of this development was the construction of the iron and steel plant at Karabuk, with an estimated annual production of 219,000 metric tons of pig iron, 229,000 tons of coke, 171,900 tons of steel ingots and 150,000 tons of rolled steel products.

Exports and imports for 1943 were, respectively, valued at £T257,000,000 and £T203,000,000. The Turks have a small but growing merchant marine. The length of the country's railway network has been expanded greatly in recent years until it now exceeds 4,600 miles, of which 95 per cent is state-owned.

ROBERT GALE WOOLBERT.

TWENTIETH CENTURY FUND. A nonprofit organization for research and public education on economic questions. The Fund was founded in 1919 and endowed by the late Edward A. Filene, Boston merchant and philanthropist. Its entire income, administered as a public trust by a Board of Trustees, is devoted to its own research and educational activities. For each major investigation the Fund appoints a special research staff and an impartial committee of qualified persons who use the factual findings of the staff as a basis for recommendations on public policy. The Fund issues its reports in book form and supplements these with news releases, pamphlets, bulletins, study outlines,

magazine articles, and other materials, including educational films and radio programs. Active contact work is maintained with organizations and educational institutions.

All the current activities of the Fund are directed toward the problem of rebuilding a sound and prosperous economic system after the strains and dislocations of war. Toward that end, the Fund is making a survey of future needs and demands for major groups of goods and services and the resources available for their production. *America's Needs and Resources* will be published early in 1946. A discussion of financial and fiscal policies has already been published as *Financing American Prosperity: A Symposium of Economists*.

Studies under way include an investigation of cartels and monopolies and of the foreign economic relations of the United States. Two new popular reports in a series of six on problems in the post-war period will also be issued, as well as a volume dealing with recent trends in collective bargaining. Recent publications of the Fund include material on housing, financial policies, collective bargaining, the power industry and distribution.

The officers of the Fund are: John H. Fahey, President; Henry S. Dennison, Chairman, Executive Committee; Morris E. Leeds, Treasurer; Evans Clark, Executive Director; and J. Frederick Dewhurst, Economist. Address: 330 West 42 Street, New York 18, New York.

ULITHI ISLANDS. A former Japanese atoll in the western Carolines, occupied by United States armed forces, Sept. 20-21, 1944. It comprises a ring of islands that surround a broad lagoon, and lies about 100 miles northeast of Yap.

UNION OF SOVIET SOCIALIST REPUBLICS (U.S.S.R.). A state occupying eastern Europe and central and northern Asia. Capital: Moscow.

Area and Population. The area as of Aug. 31, 1939, was about 8,200,000 square miles (73 per cent in Asia and 27 per cent in Europe). The census of Jan. 17, 1939, showed a population of 170,467,186 (88,802,205 females and 81,664,981 males), compared with 147,027,915 at the 1926 census. The urban population at the 1939 census was 55,909,908; rural, 124,557,278. Following the outbreak of World War II on Sept. 1, 1939, various territories (of Finland, Poland, and Rumania together with Estonia, Lithuania, and Latvia) were annexed to the Soviet Union, were occupied by German, Finnish, and Rumanian armed forces in 1941, and were freed from German occupation by Soviet armed forces and reincorporated into the Soviet Union in 1944.

The Polish territories were incorporated in the Ukrainian and Byelorussian Soviet Socialist Republics, Oct. 1-2, 1939. The Finnish provinces on Mar. 31, 1940, were joined to the Karelian S.S.R., which was then renamed the Karelo-Finnish S.S.R. and raised to the status of a constituent republic of the U.S.S.R. The major part of Bessarabia was merged with the Moldavian Autonomous S.S.R. on Aug. 2, 1940, to form the constituent Moldavian S.S.R. The remainder of Bessarabia, together with northern Bukovina, was incorporated in the Ukrainian S.S.R. Lithuania, Latvia, and Estonia were given the status of constituent republics upon annexation. The addition of these five new units raised the number of constituent republics of the Soviet Union from 11 to 16. These republics, with their capitals, areas, and populations are listed in the accompanying table.

The total area of the Soviet Union, based on the

U.S.S.R. CONSTITUENT REPUBLICS

Republics	Capital	Sq. mi.	Population
Russian S.F.S.R.	Moscow	6,444,000	109,279,000
Ukrainian S.S.R.	Kiev	223,000	40,000,000
Byelorussian S.S.R.	Minak	89,000	10,386,000
Azerbaijan S.S.R.	Baku	33,000	3,210,000
Georgian S.S.R.	Tbilisi	27,000	3,542,000
Armenian S.S.R.	Erivan	12,000	1,300,000
Turkmen S.S.R.	Ashkhabad	187,000	1,254,000
Uzbek S.S.R.	Tashkent	158,000	6,282,000
Tajik S.S.R.	Stalinabad	65,000	1,485,000
Kazakh S.S.R.	Alma-Ata	1,056,000	6,146,000
Kirghiz S.S.R.	Frunze	78,000	1,500,000
Karelo-Finnish S.S.R.	Petrozavodsk	76,000	500,000
Moldavian S.S.R.	Kishinev	13,000	2,200,000
Lithuanian S.S.R.	Vilna	24,000	2,880,000
Latvian S.S.R.	Riga	25,000	1,971,000
Estonian S.S.R.	Tallinn	18,000	1,131,000

16 constituent republics, was 8,518,000 square miles and the population was about 193,000,000. Ruthenia, also called Carpatho-Ukraine (4,886 sq. mi.; pop. 800,000) was ceded to the U.S.S.R. by Czechoslovakia on June 29, 1945, and was incorporated into the Ukrainian S.S.R. The former Japanese territories of southern Sakhalin (14,662 sq. mi.) and the Kurile Islands (3,944 sq. mi.) were made an integral part of the U.S.S.R. and nationalized (effective Sept. 20, 1945), according to a decree of the Supreme Soviet dated Feb. 2, 1946. This was in accordance with the terms of the Yalta agreement signed Feb. 11, 1945.

The populations of the 38 leading cities, including the capitals of the 16 constituent republics, are shown in the accompanying table.

POPULATIONS OF CITIES

City	Population	City	Population
Moscow	4,137,018	Voronezh	326,836
Leningrad	3,191,304	Yaroslavl	298,065
Kiev	846,293	Ivanovo	285,069
Kharkov	833,432	Archangel	281,091
Baku	809,347	Omsk	280,716
Gorky	644,116	Chelyabinsk	273,127
Odesa	604,223	Tula	272,403
Tashkent	585,005	Vilna	260,000
Tbilisi	519,175	Minsk	238,772
Rostov-on-Don	510,253	Alma-Ata	230,000
Dnepropetrovsk	500,662	Vladivostok	206,432
Stalino	462,395	Erivan	200,000
Stalingrad	445,476	Stalinsk	169,538
Sverdlovsk	425,544	Tallinn	147,000
Novosibirsk	405,589	Ashkhabad	126,600
Kazan	401,665	Kishinev	110,000
Kuibyshev	390,267	Frunze	93,000
Riga	385,000	Stalinabad	83,000
Saratov	375,860	Petrozavodsk	70,000

Education. In the academic year 1941-42, pupils attending elementary and secondary schools numbered about 36,200,000. There were about 1,200,000 students in technical schools and workers' faculties; about 1,800,000 children in nurseries and kindergartens, exclusive of 5,700,000 children placed in collective farm nurseries and kindergartens during harvest season; and 657,000 students in universities and colleges. The expenditure for education in 1945 was 28.6 billion rubles (20.4 billion rubles in 1944).

Production, etc. In Soviet Union transport and communications are conducted as Federal departments. Banking is centralized in a State Bank under government control. Distribution is socialized, with retail trade in the cities conducted mainly by local administrative bodies and in the villages by consumer cooperatives. Industrial production is carried on largely by State enterprises, operating under the general direction of appropriate commissariats (government departments). A State Planning Commission (Gosplan) plots the objectives for each year and for five-year periods. An

Economic Council acts as a coordinative body. An organization in the Commissariat of State Control checks and supervises results.

State planning is an essential of Soviet economy and it is designed to direct and coordinate the employment of the energies and resources of the country for orderly development. However, the planning system goes beyond the economic field. It includes science, education, public health, and the extensive social services designed to safeguard the welfare and security of the citizenship. Beginning in 1939, the Soviet Government withheld publication of detailed information on industrial production, agriculture, and other phases of economic development. For prewar production figures for industry, mining, and agriculture, see *YEAR BOOK* for 1942, p. 698-99.

Foreign Trade. Foreign commerce is a governmental monopoly exercised by the Commissariat of Foreign Trade which maintains trading agencies abroad. Imports and exports are regulated in accordance with the country's system of planned economy. In 1938, the last year for which trade figures were published, imports totaled 1,422,882,000 rubles and exports 1,331,927,000 rubles, nominally equivalent to \$261,757,000 and \$250,751,000, respectively, in U.S. currency.

Finance. The budget of the U.S.S.R. is a summation of the budget of the Union and the budgets of the 16 constituent republics. For 1945 a budget in the amount of 307 billion rubles was approved. About one-half the revenue was obtained from the earnings of state-owned industry, followed by taxes and contributions by the general public. Expenditure included the following amounts: defense 138 billion rubles, economic development 65 billion rubles, social and cultural services 66 billion rubles, administration 9.5 billion rubles. In 1944 actual revenue totaled 268 billion rubles and actual expenditure 263 billion rubles.

The Soviet Government repudiated the state debt outstanding as of Jan. 28, 1918. On Jan. 1, 1933, the internal debt amounted to 10.088 billion rubles; on Aug. 1, 1940, it totaled 39.8 billion rubles. The nominal exchange rate of the ruble, for foreign trade exchange valuation purposes only, was 5.3 rubles to U.S.\$1 (1 ruble = \$0.1887).

Transportation. Railway mileage increased from 53,700 in 1937 to an estimated 62,000 miles on Jan. 1, 1941 (including lines in Russian-annexed territories). Highways extended 1,682,000 miles in 1940. Some 65,826 miles of inland waterways are navigable. There was a total of 100,000 miles in the civil air network in 1940. The merchant marine on July 1, 1939, comprised 716 vessels of 1,315,766 gross tons.

Government. Under the Constitution of Dec. 5, 1936, supreme political power is vested in the Supreme Soviet of the U.S.S.R., meeting twice a year, and elected for a period of four years by universal direct suffrage and with secret ballot. The Communist Party, however, is the only legal political party and all candidates for elective office must have its approval. The Supreme Soviet consists of two legislative chambers with equal rights—the Council of the Union, and the Council of Nationalities. The Council of the Union has 647 members (one for each 300,000 inhabitants) and the Council of Nationalities 713 members representing the constituent republics (25 from each), autonomous republics (11 from each), autonomous oblasts (5 from each), and national okrugs (1 from each). The two chambers in joint session elect a Presidium consisting of 42 members (including a president, 16 vice presidents (one vice president

for each constituent republic of the Union), a secretary, and 24 others) with wide administrative powers between sessions of the Supreme Soviet, including ratification of treaties and declaration of a state of war. The Presidium supervises the work of the Council of the People's Commissars, selected by the Supreme Soviet, which acts as the executive and administrative organ of the state.

Joseph Stalin became general secretary of the Russian Communist Party in 1922 and after banishing Leon Trotsky in 1924 established a rigid but unofficial personal dictatorship through his control of Communist Party policies. He became a member of the Presidium in 1925 and on May 6, 1941, replaced Vyacheslav Molotov as President of the Council of People's Commissars, or Premier. Molotov became Vice Premier and Foreign Commissar. On July 1, 1941, after the German invasion began, the Presidium of the Supreme Soviet, the Central Committee of the Communist Party, and the Council of People's Commissars announced that all powers had been concentrated in the hands of a Committee for State Defense consisting of Stalin (chairman), Molotov (vice chairman), Marshal Klementy E. Voroshilov, L. P. Beria, Commissar for State Security, and Georgi M. Malenkov, general secretary of the Central Committee of the Communist Party. On July 20 Stalin assumed the post of Defense Commissar and assumed direct control over the Commissariat for State Security. The elections to the Supreme Soviet scheduled for 1941, 1942, 1943, and 1945 were postponed and the powers of the Supreme Soviet were extended by Presidential decree.

Events, 1945. The Face of Victory. To the Soviet Union, as to all the United Nations, 1945 brought peace with victory. For its attainment the Soviet peoples paid a larger price in the blood of their sons and in the devastation of their land than all of the Western Allies combined. Between November, 1942, and May, 1945, the Red Army fought its way forward from the Volga to the Spree, transmuting imminent defeat at Stalingrad into unlimited triumph in Berlin. The fifth and final Soviet offensive of the war was launched in central Poland on January 12. Warsaw was taken on the 17th and Danzig on March 30, while other Red forces crushed the enemy in Budapest (February 13) and Vienna (April 13). On April 25 Berlin was encircled. On the same day the 58th Guards Division of Konev's 1st Ukrainian Army effected a junction at Torgau on the Elbe with the 69th Division of General Hodges' U.S. 1st Army. "The victorious Armies of the Allied Powers," proclaimed Stalin, "have routed the German troops and linked up on the territory of Germany. Our task and our duty is to finish off the enemy. . . . We hail the gallant troops of our Allies."

On May 2, 1945, with the Red Flag flying over the ruins of the Nazi capital, the last Wehrmacht units in Berlin grounded arms. On the 7th Marshal Zhukov, joined by Tedder and Spaatz, signed documents of unconditional surrender with Keitel, Friedeburg and Stumpff. On Moscow's V-E Day (May 9) 30 salvos were fired by a thousand guns. Stalin declared: "The age-long struggle of the Slav peoples for their existence and their independence has ended in victory over the German invaders and the German tyranny. Henceforth the great banner of freedom of nations and peace among nations will fly over Europe. . . . Eternal glory to the heroes who fell in the battle against the enemy and gave their lives for the freedom and happiness of our people!" Soviet hopes for the future found voice in the words of Ilya Ehrenburg:

A new era has begun, an era of plowmen and masons, doctors and architects, of gardeners and schoolteachers, of printers and poets. Washed by the tears of spring, Europe lies wounded. Much labor, persistence, audacity and determination will be required to heal all the wounds, so that the 20th Century—saved from the bloody pit into which the Fascists had cast it—may again stride toward happiness. The boldness, talent, and conscience of our people will help the world rise to its feet.

United Nations. Long before the guns fell silent, Soviet leaders joined with their Western colleagues to plan the foundations of peace. At Yalta Stalin, Churchill and Roosevelt announced a program for occupation and control of the Reich and agreed that the Provisional Government of Poland, which Moscow had recognized on January 5, should be broadened by the inclusion of democratic leaders and should arrange for free elections. The Crimea communiqué of February 11 also called for a liberalization of the Tito regime in Yugoslavia and for concerted efforts by the three major Powers to assist liberated peoples to establish peace, secure relief, form interim democratic regimes, and facilitate free elections. An accord of March 5 on voting procedure in the UNO Security Council, projected at Dumbarton Oaks, was followed by the San Francisco Conference (April 25–June 26), planned at Yalta. In response to a plea from Truman to Stalin, Molotov headed the Soviet delegation. He asserted at the outset:

The Soviet Government attaches great importance to the International Conference in San Francisco. . . . Whatever may depend upon it and its efforts in the common cause of the creation of a postwar organization for the peace and security of nations will readily be done by the Soviet Government. . . . This great cause is resolutely backed by our peace-loving people, by the Soviet Government and the Red Army, and by our great Marshal Stalin.

Soviet Byelorussia and the Ukraine were admitted to the Conference and to the UNO as separate States in accordance with the understandings reached at Yalta. But Molotov was thwarted in his efforts to obtain the exclusion of Argentina and the admission of the new Poland. After prolonged controversy, Moscow yielded to pleas that no State on the Security Council should use its "veto" to prevent discussion of any dispute submitted by any State. The Soviet conception of the UNO was well put by *New Times* (formerly *War and the Working Class*) July 1: "Unanimity among the great powers is the cardinal factor which creates the possibility for making UNO an effective organization of international security. . . . Under what conditions will the actions of the new organization be sufficiently effective? The answer to this question was given by Comrade Stalin, as far back as Nov. 6, 1944, when he said, 'They will be effective if the Great Powers which have borne the brunt of the war against Hitler Germany continue to act in a spirit of unanimity and accord. They will not be effective if this essential condition is violated.'" On Aug. 20 the Presidium of the Supreme Soviet ratified the Charter.

Under an accord signed on June 5 by Zhukov, Eisenhower, Montgomery, and DeTassigny, the U.S.S.R., Britain, the United States, and France jointly assumed supreme authority in Germany. The four Supreme Commanders comprised a Control Council in Berlin. A joint *Kommandatura* was established for the area of Greater Berlin. The rest of the Reich was partitioned into occupation zones. At Potsdam (July 17–August 2) Stalin, Truman, and Atelee agreed on measures for the liquidation of Nazism, the military and economic disarmament of Germany and the division of reparations. The U.S.S.R. was awarded all removals of equipment from its own zone plus 25 percent of removals

from the Western zones, in addition to German assets in Finland, Eastern Austria, Hungary, Rumania, and Bulgaria. It renounced all claims to captured German gold, to German assets in other countries, and to shares of German enterprises in the Western zones. Moscow and Warsaw later agreed that Poland should receive 15 percent of the Soviet share of reparations. *Izvestia* (August 3) hailed the settlement as "a fresh assurance that the Governments and peoples of the three great democratic Powers jointly with the other United Nations will maintain a stable and equitable peace."

War with Japan. By the stipulations of a secret accord reached at Yalta and confirmed at Potsdam, the U.S.S.R. agreed to join its allies in the Far Eastern war three months after the German capitulation. On April 5 Molotov denounced the Soviet-Japanese neutrality pact of April 13, 1941. Moscow rejected various Japanese peace feelers. On August 8 the U.S.S.R. declared war on Japan, as "the only means able to bring peace nearer, to free the people from further sacrifice and suffering, and to give the Japanese people the opportunity of avoiding the danger of destruction suffered by Germany after her refusal to accept unconditional surrender."

In a week's campaign, waged while Eisenhower visited Moscow, three Soviet Army groups under Marshal Alexander Vasilevsky invaded "Manchukuo," aided by the People's Republic of Outer Mongolia. The Japanese capitulation of Aug. 14 in the face of the atomic bomb was followed by Soviet participation in the surrender ceremony aboard the U.S.S. *Missouri* on Sept. 1. Stalin announced victory anew, this time in terms of "settling the accounts" of 1904–05 as well as those of later dates.

New Frontiers. While no formal peace treaties were signed during 1945, the U.S.S.R. secured provisional control over various border districts through the verdict of arms, the terms of various inter-Allied understandings, and the provisions of armistice agreements. Southern Sakhalin and the Kurile Islands passed to the Soviet Union in August under arrangements originally discussed at Yalta. On August 14 seven Sino-Soviet agreements were signed in the Soviet capital by Molotov and Foreign Minister Wang Shih-chieh in the presence of Generalissimo Stalin and Premier T. V. Soong. By their terms a 30-year alliance was concluded between Moscow and Chungking, involving reciprocal non-intervention and respect for sovereignty and territorial integrity, as well as Soviet aid to the Central Government of China whose title to Manchuria and Sinkiang was recognized. China in turn assented to a plebiscite in Outer Mongolia (whose voters in October cast 400,074 ballots for independence and none for reunion with China) and agreed to the establishment of a joint naval base at Port Arthur, with defense in Soviet hands and civil administration in Chinese hands. The accords also provided for a free port at Dairen and joint ownership and management of the South Manchurian and Chinese Eastern Railways, now consolidated into the "Chinese Changchun Railway." In October the district of Tannu Tuva northwest of Mongolia was formally incorporated into the U.S.S.R. as the Tuvanian Autonomous Region of the RSFSR.

Along its western borders the Soviet Union had already secured possession of Bessarabia and Northern Bukovina by the Rumanian armistice of Sept. 12, 1944. Under the Finnish armistice of Sept. 19 the frontier of 1940 was restored, save that the U.S.S.R. abandoned Hanko, annexed Petsamo and

acquired a 50-year lease-hold on the Porkalla Peninsula. At Potsdam Truman and Attlee assented to the transfer of Koenigsberg and northern East Prussia to the U.S.S.R. and agreed to support Soviet claims to these territories in the final settlement. A Polish-Soviet treaty of Aug. 16, 1945, drew a new frontier along the "Curzon Line," with several deviations in Poland's favor. A Soviet-Czechoslovak pact of June 29 transferred Carpatho-Ukraine to the U.S.S.R., thus extending Russian power beyond the Carpathians and bringing all Ukrainians into a single polity for the first time.

Problems of Occupation. Beyond its restored and extended frontiers, the Soviet Union assumed duties of administering large areas taken from enemy forces. In Germany and Austria (see above) these tasks were shared with American, British, and French forces. In Czechoslovakia American units in the western districts and Soviet occupation troops elsewhere were withdrawn in November. Soviet forces likewise evacuated Yugoslav territory and withdrew most of their detachments from the soil of the new Poland. Hungary, Rumania, and Bulgaria, on the other hand, remained under Soviet occupation at the close of the year, with Soviet officials acting as chairmen of the Allied Control Commissions established in these former enemy States. Numerous tales of abuses and depredations by Red Army men appeared in the American and British press during the summer and fall. Apart from their truth or falsity, the Red Army's practice of "living off the country" led to hardship and resentment among the local populations and tended to discredit Communist groups throughout central and southeastern Europe.

At the other extremity of the Muscovite realm Soviet troops took over Korea north of 38° and occupied Manchuria where, at the request of the Chinese Government, they remained beyond the three month limit originally agreed upon. A unified administration of Korea was planned at the Moscow Conference of December as well as Soviet token participation in the occupation of Japan proper and Soviet membership in the Far Eastern Commission to be set up in Washington and in the Four Power Allied Control Council in Tokyo. The new machinery for joint administration of Japan was to be set up during 1946.

New Allies. In the wake of victory the Narkomindel (People's Commissariat of Foreign Affairs) extended the alliance system begun during hostilities and embodied in the 20-year treaties of mutual aid signed with Britain (May 26, 1942), Czechoslovakia (Dec. 12, 1943) and France (Dec. 10, 1944). On April 11, 1945, Tito and Molotov concluded a comparable Yugoslav-Soviet alliance. A similar Polish-Soviet pact was signed in Moscow on April 21 by Stalin and Osobka-Morawski. In the Orient China became a new ally (see above) and Outer Mongolia remained an old one. All of these pacts were limited to mutual defense against any effort at renewed aggression on the part of defeated foes. All were consonant with the UNO Charter which expressly recognized such "regional arrangements" (Arts. 51-52).

Reconstruction. The appalling scope of the task of repairing the wreckage of war was indicated by a report submitted to the Allied Reparations Commission on September 13. Soviet experts estimated that their country had sustained damages totalling 679,000,000 rubles from direct destruction of property, including the wrecking of 1,700 towns, 70,000 villages, 6,000,000 buildings, 84,000 schools, 43,000 libraries, 31,000 factories, 13,000 bridges, 40,000 miles of railway track, etc.

in addition to the loss of 7,000,000 horses, 17,000,000 cattle, 20,000,000 pigs and 27,000,000 sheep and goats. No figures on human casualties were released. But it appeared probable that 5,000,000 soldiers and guerrillas had given their lives in the struggle against the enemy, and that famine, disease, slavery and mass murder in the territories so long occupied by the foe, along with increased death rates and diminished birth rates throughout the Union between 1941 and 1945, had accounted for 20,000,000 civilian lives.

The Demobilization Law passed by the 12th session of the Supreme Soviet at the end of June provided for the mustering out of 13 older-aged classes. A decree of September 26 by the federal Presidium released privates and non-commissioned officers over the age of 32, along with all women in the lower ranks, teachers, specialists, students and other categories. All those demobilized—totalling 4,000,000 by mid-September—were to receive clothing and shoes, rations and transport en route to their homes, living quarters and fuel, loans for home-building in devastated districts, one year's pay for each year's service for enlisted men (with smaller payments to officers) and a guarantee of work within one month of arrival at their places of residence. Jobs for veterans were to be "not inferior to their occupations prior to Army service" and suitable to training and experience. "This article," boasted Kalinin, "is perhaps the only one of its kind in world legislation. Nor is this surprising, for its provision is possible only in a Socialist State."

The restoration of the devastated areas and re-conversion of industry were well advanced by the close of the year. Aircraft factories began producing tableware, bedsteads, and bicycles. The Commissariat of the Tank Industry, still under Col. Gen. V. A. Malishev, became the Commissariat of Transport Equipment, turning out trucks, busses, and rolling stock. A new Commissariat of Industrial Crops Cultivation, established on November 11, was charged with increasing production of cotton, sugar, flax, hemp, tobacco, rubber, etc. Although war losses were partially compensated for by the vast expansion of Soviet heavy industry during hostilities, the problem of restoring and surpassing prewar standards of production and consumption would take years. Yet the enterprise was well launched, with fewer frictions and frustrations than marked the comparable process in the West.

Five Year Plan. On Aug. 19 the Central Committee of the Communist Party and the Council of People's Commissars instructed the State Planning Commission to draw up a new *Pyatiletka* for agricultural and industrial reconstruction and expansion. The goal was complete rehabilitation of the devastated areas by 1950, plus an appreciable increase of production throughout the Union over prewar levels. The objectives of the fourth Five Year Plan contemplated the doubling of the output of electric power by 1950, with hydro-electric stations to supply almost one-third of the total. By the end of 1945 electric power output had attained its prewar level. Coal production was at 85 percent of the prewar figure. The ruined city of Stalingrad was producing 60 percent of its prewar output. Civilian goods were returning to the market, with inflated prices in open stores gradually being reduced toward normal levels. These and other achievements left few Soviet citizens doubting that the new Plan, the details of which were to be announced early in 1946, would attain its purposes, including vast housing developments and a further expansion of light and heavy industry.

The Political Scene. The structure of power within the U.S.S.R. exhibited no major changes on the morrow of victory. By V-E Day the Communist Party had 5,000,000 members, including candidates who comprised a quarter of the total, and the Komsomols c. 15,000,000 members. The majority of those carrying Party cards were new recruits of the war years. The Party held no national Conferences or Congresses during the war, nor was it indicated when Congress XIX would meet. Speculation abroad regarding possible rivalry between old leaders and new members, or between Party and Army, proved to be as baseless as rumors regarding the illness of Stalin, who took a long vacation on the Black Sea in the autumn. The members of the new military and diplomatic elite were elaborately rewarded for their services. Those who died at their posts were honored—i.e. Konstantin Oumansky, killed in a plane crash near Mexico City, Jan. 25, and Gen. Ivan D. Cherniakhovsky, fatally wounded in action Feb. 18. The venerable Mikhail Kalinin was awarded the Order of Lenin on his 70th birthday, Nov. 20.

While the composition of the Political Bureau and most other Party agencies remained unchanged, minor modifications were introduced into the formal governmental structure. In addition to the German Volga Autonomous Republic, abolished in 1941, the Crimean, Kalmyk, and Chechen-Ingush Autonomous Republics and the Karachai Autonomous Region (all in the Caucasus) were deprived of autonomy and transferred to adjacent administrative areas of the RSFSR. The State Committee of Defense (War Cabinet) was abolished in October. In all other essential respects the Soviet system, like the Party hierarchy, emerged from the war intact with no significant innovations announced or contemplated.

Toward New Elections. On Oct. 5 the federal Presidium fixed Feb. 10, 1946, as the date of elections for a new Supreme Soviet of the U.S.S.R. The existing legislature had been elected on Dec. 12, 1937. The election regulations issued on Oct. 11 (see *Information Bulletin* of the Embassy of the U.S.S.R., Washington, Nov. 24) exhibited several departures from the arrangements adopted eight years previously. The voting age remained at 18 but deputies were now required to be 23, although the Constitution of 1936 (Art. 135) set the age of 18 as the lower limit both for electors and the elected. Provisions for voting lists, electoral commissions, nominations and voting procedure conformed to earlier rules.

Multiple candidacies were contemplated. This was also the case in 1937, but in practice all nominees save one withdrew before the balloting, thus leaving the voters no choice, apart from the choice involved in the informal "primaries" whereby many candidates were called but only one was chosen. The rules of 1945 specified that the voter "leaves on each ballot the name of the candidate for whom he is voting and strikes out the names of the others. . . . If none of the candidates receives the absolute majority of votes, the respective area election commission . . . announces the holding of a ballotage of the two candidates who have received the largest number of votes and appoints a day (for the "run-off") not later than two weeks after the first election." As in 1937, candidates were nominated during December and January in the name of "the bloc of Communists and non-Party people." They included all the well-known Party leaders along with prominent non-Party members in many districts, with no rival parties permitted.

The demarcation of the new single-member elec-

tion districts indicated that there would be 656 members of the Soviet of the Union (as compared with 569 elected in 1937) and 631 members of the Soviet of Nationalities (574 in 1937). Since each constituency for the former chamber comprises 300,000 population under Soviet law, the conclusion might be drawn that the U.S.S.R. in 1946 has a population of 196,800,000, despite war losses. But no new census was taken and the inference is scarcely valid. In all probability the districts in the formerly occupied provinces (originally containing 88,000,000 inhabitants) were marked out on the model of 1937, without regard to population losses, while new districts were established in the Volga, Ural, and Siberian areas to which millions of refugees moved during the war.

Religion. Governmental cooperation with the Eastern Church developed further during the year, while polemics between the Kremlin and the Vatican grew more embittered. On Jan. 31 the first General Episcopal Assembly of the Russian Orthodox Church since the Revolution opened in Moscow to choose a successor to Patriarch Sergei, who died in May, 1944. Delegates came from many lands, including the United States whence the Metropolitan Benjamin traveled to the Soviet capital. Alexei, Metropolitan of Novgorod and Leningrad, was crowned Patriarch on Feb. 4.

Throughout the year Soviet journalists repeatedly accused the Vatican of favoring a "soft peace," supporting Polish, Spanish, and Argentine fascists, instigating "politicians in cassocks," etc. These criticisms were repeated by many Orthodox churchmen, including Metropolitan Benjamin. Papal spokesmen replied in kind. The Vatican denied in March that any negotiations with Moscow were under way. Early in July Father Leopold Braun, the only Catholic priest in Moscow and an American citizen, was fined 100 rubles for allegedly striking a doorman. In October Father Braun, who was pastor of the French Church and chaplain to American Catholics in the U.S.S.R., announced his decision to come home, after 12 years of service in the Soviet capital. His successor, Father Antonio Laberge, who assumed his duties at the end of the year, expressed enthusiasm over Russian hospitality. Despite such instances of harmony, Soviet-Vatican relations grew worse instead of better, with Communists accusing Catholics of anti-Soviet conspiracies and pro-Fascist sympathies and Catholics accusing Communists of persecution, godlessness and political use of Orthodoxy to serve purposes of aggrandizement.

Disunited Nations. Autumn saw the rise of new frictions among the Great Powers of the victorious coalition. In form, these controversies centered on procedures of peace-making. In substance, they sprang from divergent views as to the legitimate ends and means of American, British, and Soviet policies in regions outside of their respective frontiers but inevitably subject to their influence. In August, Bevin and Byrnes expressed dissatisfaction with Soviet policy in Hungary, Rumania, and Bulgaria and refused to grant recognition to the "undemocratic" regimes in these States. At Potsdam the new Council of Foreign Ministers was asked to draft peace treaties with these countries as well as with Italy and Finland. When the Council met in London on Sept. 11, Bevin and Byrnes proposed French and Chinese participation in all of the discussions, though this was not technically in conformity with some of the passages of the Potsdam Declaration. Molotov assented, only to discover that Bidault and Wang sided with Byrnes and Bevin on all controversial issues—a circumstance

attributable to the dependence of the French and Chinese Governments on Anglo-American aid for recovering control, respectively, of Indo-China and the northern Chinese provinces. On Sept. 22 Molotov withdrew his assent and held that only the American, British, and Soviet Foreign Ministers should henceforth discuss the Balkan treaties.

The Council broke up in discord on October 3 after Bevin and Byrnes had rejected Molotov's proposal and all efforts to achieve a compromise had failed. Official recriminations and reciprocal accusations of bad faith created a tense atmosphere in which Marshal Zhukov cancelled a proposed visit to the United States. Spokesmen for the Atlantic powers insisted that Balkan "democracy" and the participation of all the United Nations in treaty-making were questions of "principle." Molotov challenged British policy in Greece, supported Yugoslav claims to Trieste, advanced demands for a Soviet trusteeship over Tripolitania, and insisted upon joint control of Japan, refusing meanwhile to approve Soviet participation in the "Far Eastern Advisory Commission."

These controversies troubled those who realized that such conflict, not adjusted, would spell the suicide of civilization in the atomic age. The temporary Anglo-American monopoly of the bomb contributed to friction by fostering insecurity in the U.S.S.R. All Powers relied on traditional (i.e. pre-atomic) conceptions of global strategy in their respective quests for safety. Some Americans and Britishers, fearful of "Communism" or "Soviet imperialism," hoped to checkmate Soviet power by a new *cordon sanitaire*. Some Russians, fearful of "reaction," neo-fascism and "encirclement," hoped to weaken Anglo-American power by a "*cordon sanitaire* in reverse."

Reunited Nations. In this potentially explosive situation, wiser counsels finally prevailed, with results which at the close of the year seemed encouraging for prospects of renewed collaboration among the Super-Powers—without which there could obviously be no security for anyone. Molotov's moderate address on Nov. 6, celebrating the anniversary of the Revolution, contributed to harmony:

The significance of our victory must be seen not only in the light of the defeat of German Fascism but in the light of the military, political, and moral defeat of Fascism throughout Europe. . . . The discovery of atomic energy should not encourage either a propensity to exploit the discovery in the play of forces in international policy or an attitude of complacency as regards the future of the peace-loving nations. . . . The failure of the London Conference sounded a certain warning in this matter, but there were also difficulties in the Anglo-Soviet-American coalition during the war. Nevertheless, though not always immediately, the coalition of the three Powers was able to find a correct solution in accord with the interests of the entire anti-Hitlerite coalition and one that took into account also the need for further consolidating the collaboration of the great democratic States. . . . Only such collaboration can promote success in the work of the new international organization for lasting peace. . . .

Our country has embarked on peace-time construction. . . . The enemy interrupted our peaceful creative endeavor, but we shall make up properly for all lost time and see to it that our country shall flourish. We will have atomic energy and many other things too. . . . Our people are full of faith in their great cause, the cause of the great October Socialist Revolution.

In accordance with the Yalta decision that the Foreign Ministers of the Big Three should meet periodically, Byrnes, Bevin, and Molotov met in Moscow, Dec. 16-26, following transmission of a message from Truman to Stalin by Ambassador Harriman, who visited the Generalissimo at Sochi on Oct. 24. The final communiqué represented concessions on all sides, with Washington and London modifying many of the positions taken in the fall

in the interest of resuming progress in peace-making.

It was agreed that treaties with Italy, Finland, Hungary, Rumania, and Bulgaria should be drafted, finally drawn up, ratified and enforced by the Powers signatory to the respective armistice agreements, on the basis of recommendations of a conference of 21 States to meet not later than May 1, 1946. It was agreed that policy toward Japan should be formulated by an eleven-Power Far Eastern Commission in Washington and administered by a four-Power Allied Council in Tokyo, under the chairmanship of the Allied Supreme Commander; that an American-Soviet Commission in Korea should prepare for independence, following an interim four-Power trusteeship; that the U.S.A. and the U.S.S.R. would withdraw their forces from China at the earliest practicable moment and would practice non-intervention and promote a unified and democratic China; and that the Rumanian and Bulgarian Governments should be broadened, democratized and then recognized by Britain and America. It was finally agreed that Moscow would join London and Washington in recommending to the UNO General Assembly a resolution for a Commission for Control of Atomic Energy, charged with the tasks outlined in the Truman-King-Attlee statement of Nov. 16, composed of the States on the Security Council plus Canada, answerable to the Security Council, and authorized to "inquire into all phases of the problem and make such recommendations from time to time as it finds possible."

Problems of the Borderlands. Continuing controversies between the U.S.S.R. and the Western Powers inevitably centered in the areas where their influence and interests overlapped. These shadow-zones extended in a global semicircle from Central Europe and the Mediterranean to the Sea of Japan. Disputes were most acute in the Middle East. On March 20 Moscow denounced its pact of 1925 with Turkey and initiated negotiations for a new accord. Although Soviet proposals were not made public, they were reported to include changes in the status of the Straits, with possible Soviet bases on the Dardanelles, and retrocession of the Kars and Ardahan districts to the U.S.S.R. Turkish publicists breathed defiance. American proposals for internationalization of strategic waterways produced no new agreement by the end of the year. Soviet pressure on Turkey and alleged British support of Turkish resistance left the prospects obscure and potentially dangerous.

Sharper conflict developed in Iran, where Soviet spokesmen condemned Anglo-American influence on the "feudal-reactionary" Government at Teheran (which had rejected Soviet bids for oil concessions while respecting British and American concessions in the south) at the same time that Western critics accused the U.S.S.R. of "oil diplomacy," intervention and subversive propaganda. When rebels in Iranian Azerbaijan established an autonomous regime in late November and Soviet occupation forces denied passage to Government troops to suppress the rebellion, the United States proposed that America, Britain and the U.S.S.R. all withdraw their armies of occupation by Jan. 1, instead of March 2, 1946, as specified in existing agreements. On Dec. 3 Moscow rejected this proposal, contending that the "rebellion" was a popular movement for autonomy and democracy and that the U.S.S.R. could not foster disorder and bloodshed by permitting additional Iranian troops to enter the northern districts. When Teheran, apparently with British encouragement, submitted

the issue to the UNO in January, 1946, Moscow asked the UNO to investigate the role of British troops in Greece and Indonesia.

U.S.A. and U.S.S.R. With America and Russia emerging from the war as the two giants of world politics, all issues of global diplomacy became, directly or indirectly, issues of American-Soviet relations. Apart from the concords and discords noted above, Moscow was reported in January to have asked a long term credit of \$6,000,000,000 to promote trade and facilitate reconstruction. In July the U.S.S.R. asked UNRRA for aid amounting to \$700,000,000. Agreements were signed in December for relief to Byelorussia and the Ukraine. Negotiations over continued lend-lease aid beyond the close of hostilities were inconclusive, as were discussions regarding credits. Soviet failure to ratify the Bretton Woods Agreements by December 31 were attributed by some observers to a desire to see whether the United States was disposed to match its proposed new loan to Britain (\$4,400,000,000) with a loan to the U.S.S.R.

Soviet expectations of enlarged trade were reflected in September in the leasing by Amtorg of the Morgan estate at Glen Cove, L.I., as a recreation center for Soviet buyers. In mid-September Stalin received a delegation of American Congressmen and recalled the desire of his Government to borrow \$6,000,000,000. To Senator Pepper he expressed hopes of increased American-Soviet understanding and cooperation.

The realization of such hopes continued to be endangered by mutual suspicions, veiled rivalry for power, Soviet secretiveness and ridicule of American "freedom of the press," and widespread demands in the United States for "toughness" toward Russia and an end of "appeasement," coupled with denunciations of Soviet "tyranny" and occasional insistence that "two worlds are doomed to come into conflict" (e.g. Clare Boothe Luce, May 29). Despite many vicissitudes and numerous questions left unanswered, the year's record of American-Soviet diplomacy offered hope of sufficient harmony and unity in peace-making to avoid the disaster of a global competition for hegemony between the two colossi. Whether the Soviet leaders and the American public would continue to practice moderation, self-restraint and "realism" in a degree adequate to build an enduring structure of world collaboration remained to be seen.

See UNITED NATIONS and names of other powers and of all major States of Europe and Asia for further details of Soviet interests and policy.

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UNITARIANS. A religious denomination, founded in England in the late 18th century, which holds belief in one God in one person as opposed to the Trinity. Headquarters, 25 Beacon Street, Boston, Mass. For statistics, see RELIGIOUS ORGANIZATIONS.

UNITED BRETHREN. A term used for three religious denominations in the United States, all originating in the evangelistic movement of William Otterbein and Martin Boehm about 1800. The largest body is the Church of the United Brethren in Christ with headquarters in Dayton, Ohio. For statistics, see RELIGIOUS ORGANIZATIONS.

UNITED NATIONS INTERIM COMMISSION ON FOOD AND AGRICULTURE. A Commission established in Washington, July 15, 1943, in accordance with Resolution II adopted by the United Nations Conference on Food and Agriculture held in 1943 (see YEAR BOOK for 1943). The Commission is com-

posed of one official representative from each of the member countries. It has an Executive Committee, composed of representatives from 11 countries, and three Working Committees. The Interim Commission has established liaison with war and relief agencies, has initiated factual surveys of certain countries and areas, and is preparing reports on urgent agricultural and nutritional problems. Chairman, L. B. Pearson of Canada.

UNITED NATIONS (UN). Organized during the war to present a solid coalition against the Axis powers, the United Nations in peace assumed the duties of a world union with three major functions: to maintain international peace and security by preventing aggression and settling disputes peacefully; to develop harmonious relations between nations based on respect for equal rights and self determination of peoples; and to achieve international cooperation in economic, social, cultural and humanitarian problems and in promoting respect for human rights and fundamental freedoms.

These objectives, based on the universal hopes of mankind, can be too easily riven by immediate needs and ambitions of the separate nations. The controversies that boiled in the San Francisco Conference indicated the problems facing a world organization even though its power may be strengthened by the potential use of force. The question of world security at San Francisco provoked considerable debate on regional security agreements. Did the erection of a world Security Council invalidate such agreements as the Act of Chapultepec, or the Arab League, or an entente made between the Soviet Union and the Balkan states? The Conference finally agreed that the UN would honor the regional treaties so long as they were consistent with the general aims of the UN. To avoid more dangerous waters, the Charter made no mention of any revisions in existing treaties. Similar issues were raised on the question of "independence or self-government" for trusteeship territories, and on the question of compulsory agreement to the decisions of the International Council. Later debates on atomic energy, Greece, Indochina, the Netherlands East Indies, Manchuria, Palestine and Iran gave wider expression to local interest.

The Conference on International Organization. The ambition of the world for lasting peace lay vested in the United Nations Charter, created at San Francisco on June 26 after 62 days of discussion and debate by delegates of 50 nations representing 80 per cent of the world's population.

Behind the fact of this document sprawled a vast, complicated international background. The San Francisco Conference culminated a succession of meetings by leading powers that began with the Declaration by the United Nations signed by 26 nations at Washington, D.C. on Jan. 1, 1942, and concluded with the Big Three meeting at Berlin on July 17, 1945.

The stage of the Conference was set in the Opera House and the Veterans Building of San Francisco's Civic Center. For two months preceding the meeting special trains and 80 airplanes carried more than 3,500 staff members and equipment to this West Coast city. From this hub the news of the proceedings were radiated to all parts of the world by more than 2,500 press and radio representatives at a rate of more than 150,000 words a day. The United States delegation was ramified by consultants from 42 national organizations. The Library of Congress improvised a special research library for the convenience of all delegations. More than 12,000 telephone calls a day were transmitted

through a switchboard of 60 trunk lines manned by 38 operators, 20 of whom had a knowledge of foreign languages. The delegates used 350 vehicles, supported by trucks to carry equipment, for local transportation. Newsreel cameras recorded the Conference on 160,000 feet of film. Documentation in English and French of the Conference consumed an average of a half million sheets of paper a day.

The concept of the Charter, blueprinted at Dumbarton Oaks, actually refined the Covenant of the League of Nations with one exception—the lesson learned between wars, that for an organization to preserve peace, it must have a command of force. With this as the heart of the plan, the Dumbarton Oaks proposals conceived a Security Council, composed of the most powerful nations who would act jointly as the world warden of peace. The plan further envisaged a General Assembly of all member nations with an equal voice except in issue of peace enforcement, and an Economic and Social Council.

After eight sessions, during which the proposed Charter was considered sentence by sentence in the various committees of the San Francisco Conference, the completed Charter was presented to the United Nations delegates and adopted by acclamation during the ninth session.

The Charter describes the vital organs of the UN in its chapters on the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice and the Secretariat.

The General Assembly constitutes the framework and meeting ground of the UN. Regular annual sessions are prescribed for the Assembly; special sessions can be called when circumstances dictate. During the voting in these sessions a two-thirds majority is required on special issues, while a simple majority decides routine matters. The paramount job of the Assembly evolves in its recommendations on international problems to member nations and the Security Council. It further serves to make studies on international cooperation; aid in the election of members to serve on the Security Council, the Economic and Social Council and the Trusteeship Council; decides the budget; and deals with admission, suspension and expulsion of members.

The Security Council, with its dominating position in the UN, is responsible for the maintenance of international peace and security. The five leading powers—China, France, Great Britain, the Soviet Union and the United States—occupy permanent seats on the Council. The permanent five, however, are supplemented by six non-permanent members from the other United Nations, elected for two-year terms by the General Assembly. By means of elected members to the Security Council, the smaller nations can express their opinions and act as a rein on the permanent members. Although each member of the Security Council has one vote, a distinction is made between decisions on which the permanent members must be in unanimous accord and those on which any seven affirmative votes rule the issue. On matters leading to the possible use of force or situations jeopardizing relations within the Council, a decision is made by unanimous vote of the permanent members; on matters of procedure, elections, meetings, agencies and invitations on a non-voting basis to member nations whose interest are in discussion, approval is given by seven affirmative votes.

An Economic and Social Council was devised in the Charter to advance "social progress and human rights." Consisting of 18 members elected by the

Assembly for three-year terms, this Council strives to promote higher standards of living, solutions to economic problems, educational cooperation, and universal human rights and fundamental freedom.

On the assumption that many areas still exist which are not developed sufficiently to care for themselves, the Charter instituted a guardian agency called the Trusteeship Council composed of member nations administering such territories, other members of the Security Council, and as many other members elected for three-year terms, to insure equally divided membership between those who are and those who are not administering trust territories. Within the Council's scope of authority are those territories held under League of Nations mandates, territories taken from enemy states in World War II, and territories voluntarily placed under the system by those states responsible for their administration. Provision is made for a particular type of trusteeship over strategic areas determined as pivot points of defense against aggression. Responsibility for these areas falls to the Security Council.

To settle international disputes of a legal nature the Charter provided for an International Court of Justice, an institution comparable to the World Court of the League of Nations. The Court consists of 15 judges, no two of whom may be nationals of the same state, elected for terms of nine years by the General Assembly and the Security Council. Under the statute setting up the Court each member nation is invited to recognize as compulsory the Court Decisions in all interpretations of treaty, questions of international law and reparations.

The Secretariat, to serve the above-mentioned organs, consists of a Secretary-General appointed by the Assembly on the recommendations of the Security Council and a staff of special assistants who collate material for conferences, draft reports and accomplish general clerical duties. The Secretary-General is authorized to inform the Security Council of any matters which, in his opinion, threaten international peace.

Preparatory Commission. During the proceedings at San Francisco provision was made for a meeting of a Preparatory Commission composed of a representative from each nation that signed the Charter, with an Executive Committee from Australia, Brazil, Canada, Chile, Czechoslovakia, France, Iran, Mexico, the Netherlands, the Soviet Union, the United Kingdom, the United States and Yugoslavia. The prime object of the Committee's meeting at London in August and November was to construct the working machinery of the UN in planning the Secretariat and in establishing sessions for the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council and the International Court.

The initial decision of the Executive Committee divided the first session of the General Assembly into two parts; one organizational, the second to consider substantive problems. It was intended that action at this initial Assembly meeting would make some progress in interim measures in the trusteeship field, elect non-permanent members to the Security Council and elect members to the Economic and Social Council. The Commission further agreed that the permanent UN headquarters should be in the United States, that the functions and assets of the League of Nations should be absorbed by the UN, that the Secretariat should be set up and a Secretary-General selected at the Assembly meeting, that nominations be made to the new International Court of Justice and that press and public be admitted free to UN meetings.

In the terms of the Charter, the creation of a Human Rights Commission was mandatory with the UN's avowed determination that the rights of man shall not suffer such total disregard as has been witnessed in recent years. Under the recommendations of the Executive Committee the work of this Commission would be directed toward the formulation of an international bill of rights; recommendations for an international declaration or convention on such matters as civil liberties, status of women, freedom of information, protection of minorities, prevention of discrimination on grounds of race, sex, language or religion; and any matters within the field of human rights considered likely to impair the general welfare or friendly relations among nations.

United Nations Conference for the Establishment of an Educational, Scientific and Cultural Organization. On the first occasion where education was given an international foundation, forty-four members of the United Nations agreed in London during early November to establish a world-wide educational organization designed to improve cultural standards everywhere. The convention, representing every major nation except the Soviet Union, unanimously approved of the new agency to be known as the United Nations Educational, Scientific and Cultural Organization dedicated to raising universal educational standards and removing illiteracy and misunderstanding.

The constitution of the UNESCO emphasizes the value and need of an international exchange of scholars, teachers and books. With headquarters in Paris, the organization hopes for cooperation between nations on all new developments and findings in the fields of education, scientific research and the study of cultural problems relating to peace.

The Atomic Plan. The birth of disciplined atomic energy made public with the devastation of Hiroshima created a unique problem for the UN. In recognition of the pressing nature of the new weapon, the three joint owners of atomic knowledge, Great Britain, Canada and the United States, formulated an expedient plan in a five-day conference at Washington ending Nov. 15.

It was decided that the "know how" of atomic bomb manufacture would temporarily remain with the three joint originators, but would be shared with others after effective international controls could be devised.

The plan recommended that a special commission be established within the UN to manage the controls, outlaw the bomb as a weapon and insure the use of atomic energy only for peaceful purposes. The commission would have the authority to inspect all countries to protect complying states against violations and evasions of the agreement. In addition to its duties to inspect and safeguard, the commission would sponsor the exchange of scientific information between the various nations and would recommend any measures necessary to restrict atomic energy to peaceful use. The three signators of the plan hoped that this free exchange of knowledge would be adopted by all nations, "thereby creating an atmosphere of reciprocal confidence."

Council of Foreign Ministers. During September and early October the foreign ministers of the Big Five met in London to draw up specific peace settlements for the defeated nations. After 22 days of discussion and argument no final agreement on the important questions of Italy and the ex-Axis satellite nations of eastern Europe broke the deadlock that stalemated the conference. The conference

split between the Soviet Union on one side and China, France, Great Britain and the United States on the other, over the major issues of Danubian treaties and former Italian colonies.

Potsdam Declaration. Another attempted move toward the consolidation of mutual interest between the Big Three was enacted near Berlin on July 17 when President Truman, Marshal Stalin and Prime Minister Churchill, who was replaced in the closing sessions by the new Labor Prime Minister, Clement Attlee, met to discuss, for the most part, defeated Germany. Aside from disposing of the German problems alive in the occupation, the tripartite conference reached an agreement for a Council of Foreign Ministers representing the five principal powers to prepare the peace settlements. In the discussion of memberships in the United Nations, it was decided that the Spanish Government, founded as it was with the aid of Axis powers, would not be permitted membership.

Crimea Conference. The final meeting of the original Big Three, President Roosevelt, Marshal Stalin and Prime Minister Churchill, had occurred at Yalta in the Crimean peninsula on Feb. 4. Most of the discussions centered on deciding the salient problems that would face the United Nations in the immediate aftermath of the war. The initial announcement from the meeting declared the doom of Germany and was followed by a plan setting up a Control Commission for the administering of the German occupation and denazification. The Big Three concluded agreements on aid to liberated Europe, recognition of the new Polish Provisional Government of National Unity, recognition of the Yugoslav Government under Marshal Tito and Dr. Subasic, periodic meetings of the foreign ministers of the Big Three, and a conference of the United Nations at San Francisco on Apr. 25.

The report on the Crimea Conference stated that the mission of the proposed conference at San Francisco would be to prepare the Charter on the basis of the Dumbarton Oaks conversations. On the all important issue of Security Council vote, no accord was reached. China and France were invited, in conjunction with the Big Three, to make invitations to the conference.

The United Nations Relief and Rehabilitation Administration, although an integral part of the UN, has so large a sphere of activity that it is treated in the following separate article.

UNITED NATIONS RELIEF AND REHABILITATION ADMINISTRATION (UNRRA). An international agency established on Nov. 9, 1943, as the first service agency of the United Nations. In 1946 it was composed of 47 member governments, each of which participated in UNRRA's policy-making Council. Six governments—the United States, Great Britain, the Soviet Union, China, France and Canada—were also represented on the Central Committee, empowered to make emergency policy decisions between sessions of the Council. Executive responsibility was vested in the Director General, Herbert H. Lehman, assisted by his staff, composed of over 9,000 persons and of some 30 nationalities.

UNRRA was organized to provide relief and rehabilitation to the people of liberated territories in Europe and the Far East, concentrating primarily on assisting those nations without adequate foreign exchange resources to finance their own relief imports. This help has consisted of relief supplies—food, clothing, fuel, medicines; relief services—health and welfare services, repatriation of displaced persons; and rehabilitation supplies and services—seeds, fertilizers, insecticides, basic farm

tools, repair parts for the rehabilitation of industry, transportation and other public utilities, and raw materials.

To finance these supplies and services, each member country not occupied by the enemy was asked to contribute one percent of its national income for the year ending June 30, 1943. Meanwhile, all countries, invaded and uninvaded alike, were asked to contribute proportionately to UNRRA's administrative budget.

In 1945, UNRRA's basic shift of emphasis was from planning to operations. Prior to undertaking field activities, it had analyzed relief requirements, recruited and trained an international staff, arranged for the procurement of supplies from contributing countries, concluded agreements for assisting the military and the governments of receiving countries, and accepted administrative and operating contributions.

On April 1, 1945, UNRRA took over relief operations from the military in Greece, and in Yugoslavia on April 15. V-E Day paved the way for increasing supplies and shipping to help meet the needs of those liberated countries in Europe which did not possess adequate foreign exchange resources, and were therefore dependent upon UNRRA assistance. V-J Day made possible relief and rehabilitation operations on a global basis.

The acceleration of UNRRA's operation in 1945 was seen in the following cumulative statistics of supplies shipped overseas:

End of first quarter 1945:	87,000 long tons
End of second quarter 1945:	1,101,000 long tons
End of third quarter 1945:	2,126,000 long tons
End of fourth quarter 1945:	4,034,000 long tons

In 1946 UNRRA is providing full-scale assistance to Greece, Albania, Yugoslavia, Italy, Poland, Czechoslovakia, and China. In addition, it is giving aid to the Ukrainian and Byelorussian Soviet Socialist Republics, and providing emergency help to Finland and Hungary. Austria, Formosa, and Korea—all victims of enemy annexation in the past—have also been judged eligible to apply for assistance. Over-all responsibility for the displaced persons operations in Germany and Austria has been carried by the military authorities who have provided the basic supplies and transportation for the millions of displaced persons repatriated to their homelands. During the summer and winter of 1945-46 UNRRA personnel have assisted the military in the care of hundreds of thousands of displaced persons, and administered hundreds of D.P. assembly centers.

At the UNRRA Council Session held in London in August, 1945, a resolution was passed stating that UNRRA expected to terminate operations in Europe by the end of 1946, and in the Far East by the first quarter of 1947. In order to obtain funds to carry on full-scale operations during the period, the Council also adopted a resolution requesting a second contribution from the uninvaded nations. The British Government announced in November that a second British contribution of approximately £75,000,000 would be available. The U.S. Congress, after appropriating \$550,000,000 to complete the first American contribution of \$1,350,000,000, authorized a second contribution of the same size, and on December 18 appropriated the first installment thereof amounting to \$750,000,000. On Dec. 22, 1945, the Canadian Government announced its approval of a second Canadian contribution of \$77,000,000. As of Dec. 31, 1945, a total of \$3,611,942,710 had been paid or pledged to UNRRA—of which \$1,722,669,369

represented the second contributions of the United States, the United Kingdom, Canada, and the Dominican Republic.

HERBERT H. LEHMAN.

UNITED SERVICE ORGANIZATIONS, Inc. (USO). An organization formed Feb. 4, 1941, to provide off-duty recreational and other services to the men in the armed forces, with the following member agencies: The Young Men's Christian Association, The National Catholic Community Service, The Salvation Army, The Young Women's Christian Associations, The National Jewish Welfare Board, and the National Travelers Aid Association (q.v. under SOCIETIES). USO is supported entirely by public subscription. In 1941 and 1942 it obtained \$14,353,666 and \$32,586,501 respectively through its own campaigns. In 1943, 1944, and 1945, with other major war-related agencies, it was a member of the National War Fund (q.v.) which conducted a nationwide campaign. The National War Fund goal in 1945 was \$115,000,000, and USO's share of the total was \$52,096,500.

The groups served are men and women of the armed forces. Members of the Women's Army Corps and women's auxiliaries of the Navy, Coast Guard, and Marines are admitted to USO clubs and other service units on the same basis as men in uniform. Services are also extended, as required, to Army and Navy nurses, merchant seamen and wives of service men. Industrial workers in certain areas were also served. There are USO operations in the Continental United States, in bases elsewhere in the western hemisphere, and in the Philippine Islands. USO-Camp Shows visits American troops in all combat zones, as well as throughout the western hemisphere. More than one billion people have been served by USO since its inception.

USO came into being at the time the nation was preparing its defenses under the threat of war. Originally it was planned to operate 341 clubs in 200 communities. When America entered the war Dec. 7, 1941, USO had 496 clubs and other centers in operation. With the tremendous expansion of our armed forces USO services also had to expand rapidly; USO operations totaled 3,040 in March, 1945, but decreased after the end of the war to 2,261 on Nov. 15, 1945.

It has been necessary to diversify the types of service provided. Greatly increased travel by men in uniform called for special facilities in rail and bus stations. The Troops-in-Transit Service was instituted and by autumn, 1945, was operating 147 lounges at principal transportation centers and providing comfortable rest quarters, reading and writing material, refreshments, and information. Supplementing the lounges, 122 USO-Travelers Aid desks were assisting servicemen and their families with travel problems.

Coastal defenses were greatly strengthened after Pearl Harbor. Life at these outposts is lonely; leaves are infrequent. To reach these men USO organized its Mobile Service Division, which operates 93 units inland for troops on maneuvers. Mobile units give motion picture shows, and bring books, writing paper, games, refreshments, and other supplies.

The USO Overseas Services Department was formed to serve troops stationed in western hemisphere bases outside Continental United States. This department operates 147 clubs and other service units from Alaska and Newfoundland down through the Panama Canal, Bermuda, the Caribbean area, Brazil, and also Hawaii and the Philippine Islands.

USO-Camp Shows, an affiliate of United Service Organizations formed after Pearl Harbor, supplies live-entertainment to American service men and women all over the world, with no admission charge to anyone in the service; over 700 overseas units entertain troops in the European, Pacific, China-Burma-India, and Italian Theaters of War, as well as Alaska and the Aleutian Islands, Labrador, Greenland, Iceland, Panama, Bermuda, the Caribbean, South America, the Philippine Islands and Japan. Within the United States 23 units cover Army camps and Naval stations. Also within the United States, there are 27 units touring Army and Navy hospitals. The live-entertainment consists of leading stars from stage, screen and radio; singers, dancers, and instrumentalists from the concert stage; and, in addition, many lesser known performers who are singers, dancers, instrumentalists, actors, comedians, magicians, puppeteers, ventriloquists, jugglers, acrobats, or novelty specialists; figures in the sport world; also portrait artists who sketch GI patients in hospitals and give the sketches to the patient-models free of charge. More than 150 artists working in the United States devote considerable time to this free service. Overseas there are 26 artists and seven caricaturists. Since August 1, 1944, over 30,000 drawings have been produced.

The clubs render the chief volume of USO services. After Pearl Harbor new clubs opened at an average rate of 52 a month for nearly two years, reaching into 48 States, the District of Columbia, and 16 western hemisphere bases. There are now 1,494 clubs in Continental United States, including 584 operated by local communities in affiliation with USO. Equipped with lounges, writing rooms, showers, snack bars, game rooms, libraries, phonographs, radios, and auditoriums, they provide a haven for servicemen and women on leave from military posts. Most clubs have photographic dark rooms and craft and hobby shops. Programs include dances, moving pictures, classes in languages, crafts, art, and other subjects, social parties, forum and current event groups, sports, and musical events.

USO now maintains more than 400 operations in 84 communities adjacent to military general hospitals, at which disabled service men may learn new skills during convalescence and be entertained. Through group activities, use of program opportunities in the community, and individual services, USO seeks to offset isolation and confinement to hospital, reaction to disability and combat experience, impending discharge or reassignment to duty, and problems of family relationship which emerge from or are precipitated by family visits.

Information and counsel on personal problems constitute an increasingly important part of club services. USO staffs, carrying out the inter-faith policy of USO, offer to those desiring them, religious programs in cooperation with local clergy of the different faiths. Opportunities are also provided for servicemen and women to continue customary church attendance and association with churchmen and church members. Religious counsel, as requested, is also available.

Special programs are held for the wives of service men, such as social gatherings and classes in prenatal and child care, sewing, nutrition, and cooking.

Through the cooperation of local groups; women's organizations, civic, business, and patriotic clubs, and churches; the USO clubs reach into community life. These groups sponsor some programs within the clubs, and others elsewhere, such

as picnics, dances, beach and fishing parties, as frequently as possible. Through the club, local families invite men and women to dinners in their homes. In this way the club enters the community. The work of 1,000,000 volunteers is indispensable at clubs and lounges, not only in assisting professional staffs but also in providing companionship to men and women in service at programs and social events.

USO Scrapbook Service sends interesting and entertaining reading matter to service men and women in camps, hospitals, foreign lands, on ships at sea and wherever there are members of the armed forces. Blank scrapbooks, bought in lots from Scrapbook Service, are filled by responsible organizations of all kinds, turned back to USO for final examination, and then distributed as requested by USO departments, hospitals, and the U. S. Army and Navy.

Of USO's 2,261 operations, 1,200 are operated by USO member agencies and 914 by local communities in affiliation with USO. They are located in 996 cities and towns in 45 States, and the District of Columbia, and in 77 communities in 16 areas elsewhere in the western hemisphere. Attendance at both clubs and lounges is approximately 30,000,000 a month.

USO officers in 1945 were: Dr. Lindsley F. Kimball, President; John D. Rockefeller, Jr., Honorary Chairman; Walter Hoving, Chairman of the Board; Harper Sibley, Vice-Chairman of the Board; C. Frank Kramer, Jr., Secretary; Mrs. Henry A. Ingraham, Randall J. LeBoeuf, Jr., Francis P. Matthews, Comm. Donald McMillan, W. Spencer Robertson and Frank L. Weil, Vice-Presidents; and John F. Hickey, Treasurer. National Headquarters are in the Empire State Building, 350 Fifth Avenue, New York 1, N. Y.

UNITED STATES. War and Peace. The shadow of the Belgian bulge continued its sobering spell over the United States as 1945 opened. Allied armies were attacking the German salient in that sector of the world conflict. On the other side of the globe, MacArthur forces were bombing Luzon preparatory to a promised return to Manila.

In anticipation of fearful, and possibly drawn out, ordeals to come, the United States tightened its belt in January for an arduous journey to victory. In the 365 days that followed the trip proved not so long as had been expected, but much more awesome. The people felt the thrill of a victory over all their enemies sooner than they had any reason to hope, but its very suddenness brought forth in a rush, equally unexpected, all the problems of reconversion and peace. There was gradually a realization that the mere ending of hostilities, even on a note of triumph, did not bring the peace for which they had fought.

The problems of readjustment immediately beset what had been known for four years as the home front. There was the immediate task of binding the nations with bonds more lasting than the desperate ties of war emergency.

The atomic bomb, unleashed at Hiroshima on Aug. 6, accomplished its task, for which \$2,000,000,000 had been spent, in a few days. It ended the war abruptly. But the cones of appalling smoke had scarcely disappeared into the stratosphere over Japan, before Americans, who were chiefly responsible for this "secret weapon," became aware of the challenge of the atomic era.

How to control atomic energy was undoubtedly the most perplexing issue of the year. But there were many other, entirely domestic, trouble spots

that loomed immediately after V-J Day. There was the continuing, if not mounting, pressure of inflation to be met as war dollars were released and war controls eased. Labor, which had been held to the "Little Steel" formula, became restive as living costs edged their way to a point 33 per cent above 1941 levels. Hundreds of thousands of veterans were returned to civilian life to find a housing shortage of such proportions as to force a million families to double up. There was also the job of getting additional millions of GIs home and out of uniform.

These and other pressing matters made the people at the end of the year more aware than ever of their responsibilities in what President Roosevelt once termed this generation's "rendezvous with destiny."

The Home Front. As Allied armies began the hard push to the Rhine and then to Berlin, the cry on the home front was for more war effort—more manpower, more production, more food, more nose-to-the-grindstone. This, despite an all-time high in war production established in 1944, when 45 per cent of the nation's total production was for war materials, and half of an unprecedented \$200,000,000,000 national income had come from producing for war.

Manpower. President Roosevelt, greeting the new 79th Congress on Jan. 6 with a message on the "state of the Union," said the situation called for "total mobilization of all our human resources for prosecution of the war." He urged enactment of a National Service Act to draft manpower for war industry, as well as for military service. He also urged a draft of nurses to assure raising membership in the Army Nurse Corps from 42,000 to a needed 54,000. Voluntary enlistments, he said, had provided only one nurse for every 26 beds in military hospitals, whereas the ratio should be one to 15.

In response, the May-Bailey bill was introduced in the House and Senate to provide for the drafting of all men between 18 and 45. An estimated 4,000,000 4-Fs, rejected for military service, and all men with military deferments who did not stay at their war jobs, were to be drafted into "special service" units, and assigned where they were needed.

The May-Bailey bill, supported not only by President Roosevelt, but also by the military, including Gen. George C. Marshall and Adm. Ernest J. King, passed the House on Feb. 1. But the going was slower in the Senate which on Feb. 22 finally received from its military affairs committee a watered-down no-labor-draft substitute bill. After many weeks of debate a compromise manpower bill passed the House, 167 to 160, but lost in the Senate, 29 to 46. A nurse draft bill was passed by the House on Mar. 7, but the legislation never came to a vote in the Senate.

While neither of the President's requests for compulsory service became law, the prolonged discussion on Capitol Hill had the effect of driving large numbers of an estimated 700,000 needed workers into war industry, which was maintained at near-peak levels until end of the war.

Armed Forces. The personnel of the Armed Forces at the beginning of the year numbered 12,000,000 men and women. Of these, 8,100,000 were in the Army; the rest in the Navy, Marines and Coast Guard. In support of mounting offensives in both Europe and the Pacific, the National Selective Service system steadily tightened its deferment provisions in an effort to meet the demands of the military for manpower. Deferments for an estimated 364,000 farm workers between 18 and 25 were

discontinued on Jan. 3, and six weeks later Selective Service told its draft boards that men up to 34 years old would have to meet stiffer specifications to qualify for occupational deferment. When Congress in early May amended draft legislation to reinstate the deferment of agricultural workers, President Truman rejected it in his first veto, and the House sustained the veto, 177 to 185.

This stiffening of draft regulations continued through V-E Day, after which there were a series of relaxations, beginning with the exemption of fathers.

However, in the last week of April, with victory in Europe less than a month away, Congress extended the Selective Service Act for another year—until May 15, 1946. Principal controversy arose over the use of 18-year-olds, and the extension bill carried a provision, which the military had opposed, prohibiting the armed forces from sending into combat youths of 18 who had not had six months of military training. President Truman signed the bill on May 9 "reluctantly," he explained, because of this restriction.

War Mobilization. James F. Byrnes, director of the Office of War Mobilization and Reconversion, in a report to the President and to Congress on Jan. 1, called for an all-out war program, including legislation for strengthening the power of the War Labor Board to enforce its decisions to keep running war plants involved in labor disputes. Within the next few weeks Mr. Byrnes' office used its executive powers to the fullest to strip the home front of most of its activities not related to advancing the war.

To conserve travel and hotel space, OWMR banned conventions and trade shows. A midnight curfew was clamped on theaters, nightclubs and other places of amusement to save coal, electricity and manpower. Cities were asked to "brownout" their streets, store windows and theater marquees. Horse racing was cancelled for the season. To all of these "orders," issued in the form of requests since OWMR could enforce them only indirectly, through OPA, WMC or WPB controls, the public responded quickly and effectively. These bans for the most part were soon lifted after V-E Day. ODT said the ban on conventions had saved 52,000,000 passenger miles of travel at a time when the railroads were jammed in the deployment, or redeployment of service personnel.

Food. By 1945 the United States had established itself as the "breadbasket of the world," and was producing 30 per cent more food than in the pre-war period of 1935-39. Food was being shipped to Army and Navy personnel numbering more than 10,000,000 in all parts of the world. Through Lend-Lease, vast stores were moving into England, to Russia, whose rich Ukrainian farmlands had been devastated in the Nazi invasion, and to other nations in Europe that even in peacetime were never self-sufficient. While the Government reported that only about eight per cent of the United States' total food output was being shipped to foreign countries, shortages developed in several standard commodities, and OPA found it necessary to tighten the distribution of more and more goods. Canned fruit juices, fats and oils, and many meats, which had been off the ration list altogether in late 1944, were restored before spring of 1945, and, even then, actual shortages developed in meats generally, fats, oils, sugar, condensed and evaporated milk, canned fruits and vegetables.

Although Secretary of Agriculture Anderson on assuming duties of that office July 1, made "more food" a principal objective, many of the shortages

in food persisted throughout the year. By December all blue- and red-point rationing had ended, but grocers' shelves were still far from stocked with normal varieties of goods. Beef and lamb remained scarce, due partly to military purchases, but pork was more plentiful, due partly to a seasonal upswing in supply. Sugar remained scarce, and was the only food still on the ration list.

Other Shortages. Other scarce commodities contributed to making 1945 memorable for the nearly 130,000,000 Americans at home as a year of shortages. For several months from late winter to mid-summer dealers' stocks of cigarettes dropped from sight, and smokers queued up to get a pack of any brand offered. Cotton dresses and wool suits became increasingly hard to buy, and large department stores frequently had as few as a half dozen men's shirts. The apparel shortage was particularly felt in the fall and winter, when despite the war's end, returning servicemen had difficulty outfitting themselves in civilian attire.

Death of the President. After his fourth-term inauguration, which took place Jan. 20, not at the Capitol, but in a quiet, wintry ceremony before the White House, the people of the United States were to see little of the man who had been their President since March 4, 1933. Franklin D. Roosevelt had become almost totally absorbed in the conduct of the war, and in shaping the peace, and he left administration of home affairs more and more to his director of War Mobilization and Reconversion, James F. Byrnes.

A few days after the start of the new term, the President left for the meeting with Prime Minister Churchill and Generalissimo Stalin at Yalta. At the completion of that conference, Mr. Roosevelt and his party, which included his daughter, Mrs. Anna Boettiger, took a leisurely sea trip home, arriving in Washington Feb. 28. The next day the President reported on the historic 14,000-mile trip to a joint session of Congress. He joked about rumors of his ill health, stating that he "was not ill for a second." However, he asked pardon for delivering his address from a sitting posture, which he said "makes it a lot easier for me." Those who listened could also note an absence of the old-time resiliency in his voice, although it spoke with its accustomed firmness and confidence.

Late in March the President left the Capital again, this time for the "little White House" at Warm Springs, Ga. On the afternoon of Apr. 12 he was sitting in front of the fire-place working on papers, while an artist painted his portrait. Suddenly he complained of a severe headache and fainted. He was carried to his bedroom, where he never regained consciousness. He had suffered a cerebral hemorrhage, and died two hours later, at 4:35 P.M. He was 63.

At 5:48 P.M. a White House secretary in Washington passed the news to the world, "The President is dead." Mrs. Roosevelt, who received the word of her husband's sudden death in Washington flew at once to Warm Springs, and accompanied the body back to Washington.

Among the papers left by the late President were the last words he had written, appropriately for a speech he intended to deliver Apr. 14 in Atlanta in celebration of the 202nd anniversary of the birth of Thomas Jefferson. In his unspoken remarks the President emphasized that "Americans were determined to seek an enduring peace and assume their responsibilities in such a peace." "The only limit to our realization of tomorrow," he said, "will be our doubts of today. Let us move forward with strong and active faith."

Change of Administration. On that fateful evening of Apr. 12, Vice President Harry S. Truman, 61, of Missouri, was called quickly from his office in the Capitol, and at 7:09 P.M. before members of the Cabinet was sworn in as 32nd President of the United States. Chief Justice Harlan F. Stone administered the oath.

Before a joint session of Congress Apr. 16, the new President promised his former associates that there would be no "partial victory." He assured the "forward looking people of America" there would be "no relaxation in our efforts to improve the lot of the common people. He made known that the world security conference, scheduled to open within two weeks at San Francisco, would convene as planned by President Roosevelt. He moved to enlist the cooperation of Congress.

Cabinet. The new President asked the entire Cabinet, despite the formal resignations of all, to stay at their posts. All acceded to his request. Changes came later, however, and by year's end only three Roosevelt appointees remained. The shifts came as follows:

Secretary of State: Edward R. Stettinius, Jr., of New York, appointed Dec. 1944, was succeeded by James F. Byrnes of South Carolina, who was confirmed July 2 and took office immediately.

Secretary of the Treasury: Henry Morgenthau, Jr., of New York, who had served since Jan. 1934, was succeeded by Fred M. Vinson of Kentucky, who was confirmed July 17.

Secretary of War: Henry L. Stimson of New York, appointed July 1940, was succeeded on Sept. 25 by his under-secretary, Robert P. Patterson of New York.

Secretary of the Navy: James V. Forrestal of New York, who had served since May 1944, continued in office.

Attorney General: Francis Biddle of Philadelphia, appointed Oct. 1941, was succeeded on July 1 by Tom C. Clark of Texas.

Postmaster General: Frank C. Walker of New York, appointed Sept. 1941, was succeeded on July 1 by Robert E. Hannegan of Missouri.

Secretary of the Interior: Harold L. Ickes of Chicago, appointed in March 1933, continued in office, the only Cabinet officer remaining who had served since the beginning of the Roosevelt Administration.

Secretary of Agriculture: Claude R. Wickard of Indiana, appointed Sept. 1940, was succeeded July 1 by Rep. Clinton P. Anderson of New Mexico.

Secretary of Commerce: Henry A. Wallace of Iowa, appointed in Mar. 1945, continued in office.

Secretary of Labor: Frances Perkins of New York, who had served since Mr. Roosevelt became President in 1933, was succeeded by Lewis Schwellenbach of Washington on June 30.

Other Appointments. President Truman named John W. Snyder to succeed Mr. Vinson as director of OWMR; W. Stuart Symington to succeed Guy M. Gillette as chairman of the Surplus Property Board, and later to head the reorganized Surplus Property Administration; Gen. Omar T. Bradley to succeed Gen. Frank T. Hines as Veterans' Administrator; and Sen. Harold Burton, Republican of Ohio, to succeed Owen J. Roberts, associate justice of the Supreme Court, who retired.

Victory in Europe. Profound as was the shock of President Roosevelt's death, it did not throw out of stride the march of our armed forces to victory. The Germans, who were in Belgium at New Year's Day, were pushed back to the Rhine by Mar. 7, and so fast and furious was the Allied onslaught that the barrier of the river offered slight respite. Short of

gasoline, of airplanes and of men, the once overpowering Luftwaffe and the once invincible Wehrmacht staggered to disintegration and collapse.

The same defeat was taking place in the East, where the Russians broke through the Oder River defenses March 24. The Russians and Americans met on April 25 at the town of Torgau, cutting the Reich in two. Two million Germans in the south of the Reich gave up on May 2. On the same day Berlin fell to the Red Army, and there were reports that Hitler had ended his life rather than participate in that defeat. Four days later a million more Nazis surrendered their arms, and on May 7 emissaries of Admiral Karl Doenitz, who succeeded the Fuehrer to command, signed a surrender to Gen. Eisenhower in a Reims schoolhouse.

America received the news of Germany's surrender more in relief and gratitude than in jubilation. There was full public awareness that a war was yet to be won in the Pacific, and President Truman voiced national sentiment when in a V-E Day proclamation he called for no let-up in the war program until Japan was beaten.

President Truman warned the Japanese people of the suffering in store for them, and pointed out that "unconditional surrender" did not mean their extermination or enslavement. In a war review message on June 1, the President told Congress that forces in the Pacific, which had from the war's start taken second place to the European forces, would be doubled, and that 3,500,000 men in Europe would be transferred to the Far East to support General MacArthur's anticipated invasion of the Japanese mainland. The War Department reported that it had about 8,300,000 men overseas, 6,000,000 of whom would be sent against Japan.

The period between V-E Day and V-J Day will be remembered chiefly for its jammed eastern terminals as soldiers arrived by the thousands for redeployment to the Pacific, and for newspaper accounts of GIs sleeping uncomfortably nights on end in antiquated railway day coaches pressed into service to get them to Pacific ports.

Victory in Japan. With the Philippines retaken in January and February, Iwo Jima and Okinawa captured in campaigns dating Feb. 18 to Mar. 16, and Apr. 1 to June 21, respectively, the next step was invasion of the enemy's homeland.

While attending the "Big Three" conference outside Berlin, President Truman and Prime Minister Attlee issued on July 26 the Potsdam ultimatum calling upon Japan to surrender unconditionally at once, or face "complete destruction."

A Japanese rejection of the ultimatum was answered on Aug. 6, when a single B-29 soaring over Hiroshima, dropped our new "secret weapon" and obliterated 60 per cent of the city. The weapon was the atomic bomb. A second atomic bomb was dropped on Nagasaki with even more devastating result three days later. Meanwhile, on Aug. 8, Russia joined in the war against Japan, and began marching on Manchuria.

On Aug. 10 the Japanese Government sued for peace on condition that Emperor Hirohito be permitted to remain on the throne. The Allies agreed on the understanding that the Emperor would take orders from the Allied Supreme Commander. This the Japanese accepted, and at 7 P.M., Aug. 14, President Truman announced that the war was over.

This time victory was complete, and the Nation, on Presidential decree, took a two-day holiday, Aug. 15 and 16. V-J Day was not proclaimed formally, however, until Sept. 2, after Mr. Truman received the signal that Japanese emissaries had

signed the surrender papers proffered by Gen. MacArthur, appointed Allied Supreme Commander.

War Casualties. An official report on Sept. 20 listed total Army and Navy casualties at 1,071,266. The Army reported 205,569 killed; 571,698 wounded; 24,131 missing; and 120,988 prisoners. The Navy had 54,068 killed; 80,236 wounded; 11,197 missing; and 3,379 prisoners.

The Navy disclosed that during the war it had lost 696 vessels of all types as the result of enemy action and other causes.

Demobilization. Three days after the German surrender, May 10, the War Department announced its point system for releasing personnel. Men in service would receive one point for each month of service since Sept. 16, 1940; one point for each month overseas; five points for the first and each additional award of certain decorations; and 12 points for each child under 18 (limit of three). A total of 85 points was initially required for discharge, but this total was reduced several times after V-J Day. The Navy adopted a similar plan for releasing its personnel.

Despite Army and Navy insistence that they were bringing the men home as fast as possible, in view of the necessity for maintaining occupation forces in Germany and Japan, and of a shipping shortage, public protests against alleged slow progress crescendoed through the fall and winter.

By Dec. 31 the Army estimated it had discharged about 4,000,000 men and women, or about one-half of its V-E Day peak. It planned to reduce its personnel down to about 1,630,000 by June 30, 1946. The Navy ended the year with about 2,000,000 men still in uniform, and 1,000,000 men discharged.

Meanwhile, under Selective Service the Army was inducting 37,000 men a month, and the Navy about 1,000. Replacements were also augmented by approximately 400,000 enlistments, provided for in a new Congressional enactment.

The Atomic Bomb. On the morning of Aug. 7, American newspaper readers picked up their morning editions to read the startling news that a single missile, equal in strength to 20,000 tons of TNT which would have required 2,000 B-29s for transport, had been dropped on Japan a few hours previously. Simultaneous White House and War Department announcements of this new weapon took the public by complete surprise.

The statement of President Truman, who was en route home from his "Big Three" conference at Potsdam, emphasized that one of the scientific landmarks of the century had been passed, and that the "age of atomic energy" was at hand. But the average citizen marvelled more that this great new and terrible thing had been developed in his midst without his knowledge or suspicion.

The bomb was the war's best kept secret. For three years, the Army, directed and spurred by President Roosevelt, worked on a \$2,000,000,000 gamble that a practical means of disintegrating the atom could be developed to release the tremendous force that scientists knew was latent.

Three secret cities—at Oak Ridge, Tenn.; Los Alamos, N. M.; and Richland Village, Wash.—had sprung up. In these communities which totalled some 100,000 residents the principal work of the Army's mysterious "Manhattan Project" was carried on. But in scores of cities throughout the country thousands of workers were contributing strange gadgets and materials. And no one person knew what the thing he was making, or doing, was for.

The "Manhattan Project," directed by Maj. Gen. Leslie R. Groves, became the melting pot for the

discoveries and experiments of many outstanding scientists. To mention just one, Enrico Fermi, an emigre Italian scientist, succeeded in early 1943 in bombarding with neutrons the sensitive element known as Uranium-235, which made it possible to set off a so-called chain reaction in which the splitting of one atom split another and another with unheard of results in force.

Even the experimental blast in the remote New Mexican desert just before dawn on July 17 was not revealed for what it was—the first detonation of an atomic bomb—until the official announcement of Aug. 6. The War Department had successfully deceived the curious who wondered why the sky lighted up “like mid-day” at 5:30 o’clock in the morning, and why houses shook and window panes were broken in cities 100 miles away.

The thrill of this secret absorbed America on Aug. 6 and 7. Then came the reports of the terrible and instantaneous destruction of most of Hiroshima, a city of 318,000 inhabitants, and of the razing of Nagasaki upon which two days later the second and last atomic bomb of the war was dropped.

It was then that Americans, on second thought, felt the full effect of President Truman’s words that “the atomic age” had been ushered in. It was generally feared, if not admitted or realized, that our secret, shared only with Great Britain and Canada, could not be kept. That the “atomic age” was here, not just for us, but for the whole world—for good or evil. Thereafter, this awesome, sobering thought permeated most of our political and diplomatic thinking. One effect was to lower to near insignificance the already impaired prestige of isolationism. It was felt generally that this new weapon, for which we were chiefly responsible, had not only revolutionized warfare, but made it, at long last, intolerable.

In a special message to Congress, President Truman warned that atomic force “in ignorant or evil hands could inflict untold disaster upon the nation and the world.” He urged immediate legislation to create “an atomic energy commission,” and the fixing of a national policy to promote the national welfare, for securing the national defense, for safeguarding world peace, and for acquiring knowledge. A few days later, however, he told a press conference in Tiptonville, Tenn., that the United States would retain the secret of atomic bomb production, with only Great Britain and Canada sharing the knowledge.

Meanwhile, many suggestions were being made. Sixty-four members of the University of Chicago expressed the point of view of most scientists when they urged the President to permit the United States to share the secret of the bomb, stating that “secrecy . . . is a temporary safeguard against frightful danger.”

In Congress, Senator Connally, chairman of the Foreign Relations Committee, suggested on Sept. 8 that the United States furnish atomic bombs to the United Nations Security Council, but retain the secret and tie-up “all available sources” of uranium and other necessary elements. Senator Vandenberg, ranking Republican member of the same committee, offered a resolution calling for a joint committee of six House and six Senate members to conduct a full study on “the development and control of the atomic bomb.” Sen. Brien McMahon of Connecticut introduced a bill providing for federal control over the application of atomic energy for the nation’s benefit. In late October an 11-man Senate investigating committee on atomic energy was authorized under the chairmanship of Sen. McMahon to begin a detailed hearing of

testimony from leaders of the “Manhattan Project” and eminent scientists. A House committee took up an administration-supported bill to nationalize atomic energy.

In November Prime Minister Attlee of Great Britain and Prime Minister Mackenzie King of Canada came to Washington to join President Truman in conferences on the atomic bomb, which the three countries had cooperated in producing. On Nov. 15 the three leaders announced a joint decision to share the atomic bomb secret with other United Nations “just as soon as effective enforceable safeguards against its use for destructive purposes can be devised. They recommended creation of a commission with the United Nations Organization to study the questions of (1) elimination of atomic weapons from “national armaments”; and (2) “inspection and other means to protect complying states against the hazards of violations and evasions.”

Secretary of State Byrnes took this proposal to a December meeting of the “Big Three” foreign ministers in Moscow in an effort to secure Russian cooperation in plans to control atomic energy internationally. Under terms of an agreement reached there, a commission of the UNO Security Council would seek means of outlawing atomic armaments. The commission, it was stated, would be composed of representatives of the 11 nations holding Council seats, and would work toward international exchange of scientific information for peaceful ends; control of atomic energy to insure its use for peaceful purposes; elimination of atomic and other weapons adaptable to mass destruction, and safeguards against violations and evasions of the control regulations.

Reconversion and Postwar Planning. America’s industrial growth during the war had been phenomenal. In a record-breaking five-year expansion, the country had more than doubled its industrial output, to produce \$188,000,000,000 worth of weapons of war. The aircraft industry, in comparative infancy when the war started, built \$44,442,000,000 worth of planes. A total of \$40,644,000,000 in shipping had been constructed.

Chairman Krug in the WPB’s final report urged that industrial mobilization after the war “be kept alive and current.” But as soon as the war ended the Government faced abruptly the task of making it possible for industry to so maintain itself. Production must be shifted from wartime to peacetime goods. The Army and Navy were cancelling millions of dollars worth of war contracts daily. This left millions of workers facing unemployment, and at least temporary displacement unless the reconversion was accomplished quickly and in orderly fashion.

To start the reconversion ball rolling, the administration lived up largely to its wartime promise to lift emergency controls as soon as possible. Even before V-J Day, WPB began lifting its priority hold on hundreds of materials, and this process was speeded after the Japanese surrender until the WPB went out of existence Nov. 3. It was succeeded by the Civilian Production Administration, which under John D. Small, was committed to the task of “expanding the production of materials still in short supply.”

The country’s 140,000,000 population (a November estimate of the Census Bureau), or that part of it in civilian status, enjoyed the first concrete evidence of returning peacetime when the Office of Price Administration on Aug. 15—day after Japan surrendered—lifted gasoline and fuel oil rationing, and took a number of canned goods off the ration

list. Red point rationing of meats and butter was ended Nov. 23, as steaks, chops and roasts began appearing more plentifully in the butcher shops. Shoe rationing ended in October, and a housewife's only need for a ration book at the end of the year was to buy sugar, the first food to go on rationing in Mar. 1942. Rationing of automobiles and tires was likewise ended.

But while the end of rationing was welcomed, there were fears in some administration quarters that lifting of these controls on distribution would aggravate the pressures on inflation. Between 1939 and 1944 national income rose from \$88,600,000,000 annually to \$198,700,000,000, placing more money than ever in the hands of 64,000,000 wage and salary earners. And there was still very little in civilian goods for these war dollars to buy!

Price Administrator Chester Bowles, the life of whose agency had been extended by Congress in the spring until June 30, 1946, declared that OPA planned to put ceiling prices on civilian goods made in the reconversion period, assuring industry "good profits when production starts rolling," while protecting the consumer against inflation. He also advocated continued ceilings on rents, and the application of price ceilings to houses, new and old, placed on sale. In this he was supported by the White House.

War Agencies Abolished. By the end of the year these once powerful war agencies had gone out of existence: the War Production Board, the Office of War Information, the Office of Censorship, the War Labor Board, and the Office of Civilian Defense.

The Administration Program. The Government did not propose to leave reconversion to a policy of easing wartime controls and of *laissez-faire*. Just three weeks after Japan's surrender ended the war, President Truman, on Sept. 6, sent Congress a long message outlining his proposals to effect a reconversion to the "greatest peacetime industrial activity we have ever seen." While he supplemented the message with other requests later, the 21 points he listed at that time form the basis of the Administration's postwar program. In summary the points were:

1. Unemployment compensation—supplementation of state benefits to provide 26 weeks' protection at \$25 a week maximum.

2. Fair Labor Standards Act—"substantial" increase over the present 40 cents an hour minimum wage to eliminate living substandards.

3. Wartime controls—caution on removal by Congress.

4. Executive agencies reorganization—authorization to the President to reorganize the Executive Branch of the Government.

5. Full employment—early action on the bill to provide machinery for a continuous full employment policy.

6. Fair Employment Practices Commission—putting it on a permanent basis.

7. Labor disputes and wage stabilization—labor-management cooperation in peace as in war to keep disputes "at a minimum" and adjustments in wage rates to eliminate inequities.

8. U. S. Employment Service extension—continuation until at least June 30, 1947, before returning it to the States.

9. Agriculture—transfer of \$500,000,000 of Lend-Lease funds to the Commodity Credit Corporation for price support; crop insurance program; scientific research; development of farm export markets.

10. Selective Service—inducements for volun-

tary enlistments and induction from the 18-25 age group for a maximum of two years' service.

11. Housing—aid to private enterprise in building 10,000,000 to 15,000,000 houses in the next 10 years; slum clearance; low-rent housing; speeding rural housing.

12. Research—a single agency for Federal scientific research and promotion of private research.

13. Transition tax revision—limited tax reductions for 1946 and later modernization and cuts.

14. Surplus property disposal—abolishing the present three-man board, and setting up a Surplus Property Administration under a single head.

15. Small business—protection and encouragement.

16. Veterans—liberalized hospital and medical care, vocational training and education, loan guarantees and life insurance; social security coverage for the period of service.

17. Public works and national resources—regional development of the nation's river valleys; construction of Federal buildings, roads and airports; grants to States and municipalities for public works and hospitals.

18. Lend-Lease and postwar reconstruction—liberal settlements to permit "a sound world-wide economy"; continued economic assistance abroad; appropriation of \$550,000,000 and \$1,350,000,000 for the United Nations Relief and Rehabilitation Administration.

19. Congressional salaries—increase to \$20,000 for House and Senate members; repeal of House expense allowance; adequate retirement system for members of Congress; adequate wage scale for executive and judicial branches.

20. Sale of ships—disposal of our large surplus tonnage to expedite resumption of our normal merchant marine operations.

21. Stockpiling of strategic materials—acquisition and retention of materials in which our country is naturally deficient, but which are necessary to national defense.

The President's success in getting this program enacted into law may be noted below in the discussion of Congress.

Labor. President Truman's mention of labor-management cooperation in his reconversion proposals was prompted by an awareness of labor unrest growing out of wartime restrictions on wage increase, and a realization that continued work stoppages holding up production could wreck the entire reconversion program.

Evidence of labor unrest, and labor-management conflict had been plain since early spring. Labor, fettered by the "little steel" formula which held wages pretty much to a 15 per cent cost-of-living rise over 1941 levels, complained that the cost of living had actually far outstripped the working man's increases in take-home pay. Anticipating that labor would suffer even more when the war's end brought on sudden, drastic production cut-backs, leaders of organized labor began in May to voice demands intended to "cushion" the shock.

A dispute in the coal mines dramatized the development. Strikes in April and May resulted in concessions which brought the miners increases of from \$1.25 a day in the soft coal fields, to \$1.37½ in the hard coal mines.

The situation was almost certain to explode when the tie of war emergency was severed, ending for all practical purposes the "no-strike" pledges, and the control of the "little steel" formula. Government estimates showed the rise in the cost of living since 1941 to be about 33 per cent. This figure was close to the 30 per cent pay increases which

various large unions began asking for, but the demand was based primarily on a reduction in the work week, from 48 and 52 hours during wartime, to a normal 40 hours. This involved elimination of most overtime pay, and reduced workers' earnings by near a third.

The country's industries aligned themselves in opposition, declaring that they could not grant substantial pay increases, such as those asked, without raising prices. And OPA stood in the way of price rises.

Anticipating the storm, and also the termination of the War Labor Board, which during the war had provided machinery for breaking deadlocks in disputes, President Truman sought substitute machinery, preferably outside the Government to settle differences without resort to strikes or lockouts. He called a labor-management conference of 16 leaders each from industry and from labor, and opening it in Washington on Nov. 5 called upon the conferees to formulate a "broad and permanent foundation for industrial peace and progress." He stressed the necessity for collective bargaining, and as a last resort for some impartial machinery for reaching decisions.

The conference hit a snag at the start when Philip Murray of the CIO sought to include a discussion of wage increases on the agenda. While he was backed by Secretary of Commerce Wallace, who with Labor Secretary Schwelienbach represented the Government, vigorous opposition rose not only from the industry side of the table, but also from William Green of the American Federation of Labor.

After three weeks, the conference broke up in a disappointing failure. While it produced a resolution calling for future discussions, it was able to agree on no collective bargaining machinery, as the President had hoped.

Meanwhile, a dispute between the United Oil Workers, CIO, and 11 oil companies producing and refining oil, involving 250,000 workers and a demand for a 30 per cent wage increase, failed of settlement in negotiation and President Truman on Oct. 4 directed the Navy to seize the plants to avert a stoppage of production.

Even as the labor-management conference was in progress, the most serious and widespread strike in labor history hit the automobile industry just as its first postwar cars began rolling off the assembly line. A total of 180,000 members of the United Automobile Workers walked out at 80 plants of the General Motors Corporation in 20 States on Nov. 21, and at the end of the year, six weeks later, little progress had been made at collective bargaining, not to mention settlement.

The GM case was watched closely, both because it was the union's first move on the automobile industry, with Ford and Chrysler scheduled for consideration next, and because the issues involved and the way they were met might lead to an entirely new approach to labor-management relations.

The UAW, speaking chiefly through Walter Reuther, its vice president in charge of the GM division, presented a demand for a 30 per cent pay rise and insisted that in granting the increase the company agree not to increase car prices. The company, showing willingness to bargain the first point (although it denied wages could be increased without a lifting of OPA price ceilings on cars), refused to discuss its ability to pay higher wages. This, it argued, was in the realm of management, not of labor.

As this case developed, and after the labor-man-

agement conference failed to produce a solution for just such disputes, President Truman urged Congress in December for legislation authorizing him to set up fact-finding committees to function during a 30-day "cooling-off" period in determining and reporting to him on the merits of the sides in conflict. Lacking such legislation, he immediately named fact-finding committees, under his war powers, in the oil and General Motors cases. The method was blocked, temporarily at least, by the refusal of General Motors officials to furnish a fact-finding committee headed by Lloyd K. Garrison with data regarding its ability to meet union demands.

President Truman on the last day of the year named a third fact-finding committee to intervene in a dispute between the United Steel Workers, CIO, and the steel industry, involving a demand for a \$2-a-day pay increase. Collective bargaining had bogged down on the industry's insistence that it could not pay higher wages to some 700,000 employees without obtaining from OPA a higher ceiling for its product. Meanwhile, the union had voted a strike for Jan. 14, unless agreements were reached.

As the year closed a dozen major strikes, involving more than 1,000,000 workers, were in progress or were scheduled.

Foreign Relations. The year which saw the United States emerge as one of the two greatest world powers, also saw it move toward assuming its full responsibility in that role as a force for peace. The record is one of initiative in seeking a foundation for practical international cooperation, as a substitute for political and economic rivalry. The record also represents a complete reversal of our thinking and action after World War I, when we retreated to isolationism. If the lessons of a second world war, predicted by Woodrow Wilson, prepared us for this new approach, the development of the atomic bomb fixed our course.

Foreign Policy. President Truman made his Administration's clearest statement of foreign policy when after reviewing the fleet in New York on Navy Day, Oct. 27, he said "we seek to use our military strength solely to preserve the peace." He declared that we sought no territorial expansion; we wanted self-government returned to all people who had been deprived of it by force; we believed all peoples prepared for self-government should be permitted to choose their own form; we would try to help defeated nations to establish peaceful democratic governments in a world in which nazism, fascism and military aggression cannot exist. He concluded a list of 12 foreign policy objectives with a statement of our conviction "That the preservation of peace between nations requires a united nations organization composed of all the peace-loving nations of the world who are willing jointly to use force if necessary to insure peace."

Yalta. President Roosevelt had met Prime Minister Churchill and Generalissimo Stalin on Feb. 4 at Yalta in the Crimea. This first meeting of the "Big Three" since Teheran in Dec., 1943, was to be their last. The Conference set up the three-power occupation of Germany following her collapse. It expressed determination of the "Big Three" to disarm and disband German armed forces, and bring Nazi war criminals to justice. The Polish boundary was defined and a commission named to work out a "broadened base" for that country's democratic government. It was also agreed that a conference of the United Nations should be called on April 25 at San Francisco to prepare the Charter for a world security organization, such as was informally proposed at Dumbarton Oaks in 1944.

United Nations. Even before his return to Washington, President Roosevelt had appointed the United States delegation to San Francisco. It included Edward R. Stettinius, Jr., Secretary of State, chairman; Cordell Hull, former Secretary of State, senior adviser; Sen. Tom Connally, chairman of the Foreign Relations Committee; Sen. Arthur Vandenberg, ranking Republican member of that committee; Rep. Sol Bloom, chairman of the House Foreign Affairs Committee; Rep. Charles A. Eaton, ranking Republican member of that committee; Commander Harold Stassen, former Republican governor of Minnesota; and Dean Virginia Gildersleeve, of Barnard College, N. Y.

One of President Truman's first acts, after announcing that the meeting would go forward as the late President had planned it, was to request Generalissimo Stalin to bolster the Soviet delegation with the presence of Foreign Commissar V. M. Molotov, who had planned not to attend. The request was granted, and Mr. Molotov visited the new President in Washington before proceeding to San Francisco.

The Conference opened April 25 with 46 nations represented. In brief message delivered by telephone from Washington, Mr. Truman appealed for achievement of a "just and lasting peace." The conference spent eight weeks working out a satisfactory balance between the "Big Five"—the United States, Britain, Russia, China and France—and the smaller nations, led by Australia.

The result was a United Nations Organization with a Security Council of major powers and a rotating number of smaller ones to take charge of police responsibilities, and an Assembly of delegates from all participating nations to function something as did the old League of Nations.

Fifty nations signed the charter on June 26. President Truman, attending the final session, hailed the accomplishment, but warned that it constituted "only a first step to a lasting peace."

Sen. Connally, reporting to the Senate two days later, urged speedy ratification, and ratification was voted 89 to 2 on July 28, before a midsummer recess. The only set speech in opposition was made by Sen. Burton K. Wheeler of Montana, who, nevertheless, voted for the charter. Only Sen. William Langer, North Dakota Republican, and Sen. Henrik Shipstead, Republican of Minnesota, voted "No." But Sen. Hiram Johnson, Republican of California, who voted against the League of Nations, said he would have voted against the Charter had he not been confined to a hospital bed.

Upon his return from San Francisco, Secretary Stettinius resigned from the State Department, and in accepting the resignation, President Truman immediately appointed Mr. Stettinius U. S. delegate to the proposed UNO Security Council.

On Oct. 24, when receipt of the Soviet instrument of ratification brought the total of adhering nations to 29, Secretary of State Byrnes signed the protocol formally attesting that the charter of the UNO had "become the law of the world."

After Congress in December passed the UNO participation bill (the Senate, 65 to 7; and the House, 344 to 15), Mr. Truman named these delegates to the Assembly, the first session of which was to meet in London Jan. 10, 1946: Mr. Byrnes, who was to act temporarily as head; Senators Connally and Vandenberg; and Mrs. Eleanor Roosevelt, widow of the late President.

Bretton Woods. The Administration introduced in both Houses of Congress bills authorizing the President to join by executive agreement with other nations in the Bretton Woods economic program

looking toward stabilization of world currencies and expansion of world trade. The proposals contemplated an international bank, capitalized at \$9,000,000,000, the U. S. share of which would be \$3,175,000,000; and, secondly, a monetary fund with a revolving fund of \$8,800,000,000 to be used for loans to countries for stabilization purposes.

Opposition, spearheaded at first by banking interests, focused on the fund, said to provide no control over borrowers, and might lead to loose expenditures for political purposes. When the Senate Banking and Currency Committee reported the bill favorably, a Republican minority, headed by Sen. Robert A. Taft of Ohio, denounced the international bank as "an extension to the world of the theories so vigorously advanced by Henry Wallace at home," and called the fund "merely a waste of money." This minority asked for postponement.

However, the majorities of both houses adhered to the Administration view that Bretton Woods held the best promise for world economic peace, and that failure of the American Government to take part in it would mean its collapse. Congressional action was completed July 20. The House had voted 345 to 18, and the Senate, 61 to 16. The President signed the bill en route to the Potsdam Conference.

By Dec. 27 a sufficient number of the 43 other signers at Bretton Woods had also accepted to bring it into being, and at a State Department ceremony representatives of 28 nations signed documents confirming their Governments' ratification. Before the year ended the total had reached 34.

Lend-lease. By Mar. 31 this country had in four years delivered goods and services worth \$38,900,000,000 to our Allies, and had received nearly \$5,000,000,000 in reverse Lend-Lease. Both must continue, Mr. Truman told Congress in a report, as a military necessity. Congress voted an extension, but stipulated that Lend-Lease operations be restricted to "defense goods . . . promoting the defense of the United States."

Accordingly, when the war ended in August, President Truman called an abrupt halt to Lend-Lease, notifying those Allied governments interested to take over, through purchase, some \$2,000,000,000 in goods already contracted for, and, through negotiation, another \$1,500,000,000 of supplies in stockpiles all over the world. This sudden termination drew a protest from Great Britain, and the Administration answered that this matter was "up to Congress."

President Truman told Congress on Aug. 30 that to collect the \$42,000,000,000 which we had sent our Allies in goods and services, might sow "the seeds of a world conflagration," and he indicated U. S. policy in the remark that war sacrifices "cannot be evaluated in monetary terms."

Potsdam. The first result of the "Big Three" conference outside Berlin was the declaration against Japan in which President Truman and the new British Prime Minister, Clement R. Attlee, called upon the Japanese to surrender at once. It had been agreed, but not announced, that Russia would later join in war upon Japan.

The main Potsdam agreement came a week later, when on Aug. 2, Messrs. Truman, Attlee and Stalin announced that (1) a council of the foreign ministers of their countries would continue preparatory work for peace settlements; (2) they had agreed to carry out the Yalta Declaration on Germany with militarism and Nazism wiped out; (3) they planned early trial of war criminals; and (4) the three countries would get reparations from Germany out of their respective zones of occupation.

Pan-America. Secretary of State Stettinius led a United States delegation at an Inter-American Conference on Problems of War and Peace Feb. 22 at Mexico City. Out of the meeting came the Act of Chapultepec, an agreement guaranteeing mutual aid of the American nations against aggressors who during the war attacked the territorial integrity or political independence of any of the nations. It provided for a treaty to be drafted extending the guarantees after the war.

Much discussion centered around absence of Argentina, the only Western Hemisphere nation not to have declared war on the Axis, and the conference decided that Argentina must adhere to Chapultepec, declare war, and sign the declaration of the United Nations before being returned to the family of American nations.

The course of relations between the United States and Argentina remained rough, but, after Argentina declared war on Germany and Japan (Mar. 27), we took the lead at San Francisco to bring Argentina into UNO.

In view of what the United States regarded as undemocratic developments in Argentine politics, however, Under Secretary of State Dean Acheson on Oct. 23 denounced the South American Government, and asked for postponement of a Pan-American conference that was to convene October 20 in Rio de Janeiro to negotiate a military alliance of the Americas. The meeting did not take place.

China. The abrupt resignation Nov. 27 of Maj. Gen. Patrick J. Hurley as ambassador to China after charging State Department subordinates had sabotaged U. S. policy in regard to support of the Nationalist government there, had the effect of drawing emphatic statements from the Administration on that policy. Mr. Truman issued a statement as Gen. George C. Marshall, named as Gen. Hurley's successor, left for his new post. The United States, said the President, sought cessation of hostilities between the armies of Chiang Kai-shek and the Chinese Communists, and secondly, a national conference of major political elements to bring about "the unification of China." Both the President and Secretary Byrnes, in earlier statements, left no doubt that the United States was supporting the Chiang Kai-shek regime.

The Senate Foreign Relations Committee heard Gen. Hurley's charges, including an attack on Under Secretary Acheson for alleged support of Chinese communists in their efforts to get American lend-lease arms, but the hearing was concluded without recommendation.

Foreign Ministers. The first meeting in London of the foreign ministers, following Potsdam, ended in collapse on Oct. 3. Secretary Byrnes and Foreign Minister Bevin of Great Britain rejected a compromise offered by Foreign Commissar Molotov of the U.S.S.R. that would have excluded China from signing the Italian peace pact, and China and France from pacts affecting the Balkans and Finland.

A second conference in Moscow three months later met with greater success. It was agreed that a commission of the Security Council in UNO would seek means to outlaw atomic armaments, and to work toward an international exchange of information on the development of atomic energy.

Another important agreement gave Russia a voice in the administration of affairs in occupied Japan. Under the terms, Gen. MacArthur, Supreme Allied Commander, was to act under the policy direction of the Far Eastern Commission, of which Russia was a member, and, on Russian insistence, each member was to have the power of veto.

British Loan. Immediately after the war ended, Great Britain, partly because of the abrupt ending of American Lend-Lease, applied for a recovery loan, and negotiations between the Earl of Halifax, British ambassador, and Lord Keynes, British economist, and the State Department continued through three months. On Dec. 5, President Truman and Prime Minister Attlee announced the signing of a loan of \$4,400,000,000. It was to be payable at 2 per cent interest in 50 annual instalments. Interest was to be waived during years the British found it did not have the dollars to pay with. The loan awaited Senate approval at end of the year.

Congress. The 79th Congress assembled Jan. 3 with a strengthened Democratic majority in the House as a result of the 1944 national election. The political lineup in the Senate was 57 Democrats (same as in the previous Congress), 38 Republicans and one Progressive. In the House, where the Democrats had gained 28 seats, there were 243 Democrats, 190 Republicans, one Progressive and one American-Laborite.

Vice President Harry S. Truman succeeded Henry A. Wallace as president of the Senate. When Mr. Truman became President of the United States on Apr. 12, Sen. Kenneth McKellar of Tennessee, the president pro tempore, became acting president of the Senate. Sen. Alben W. Barkley of Kentucky was reelected majority leader, and Sen. Wallace H. White of Maine, was minority leader. Party whips were Sen. Lister Hill of Alabama for the Democrats, and Sen. Kenneth S. Wherry of Nebraska for the Republicans.

Rep. Sam Rayburn of Texas was reelected Speaker. Rep. John W. McCormack of Massachusetts was reelected majority leader, and Rep. Joseph L. Martin of Massachusetts, minority leader. Rep. Robert Ramspeck of Georgia remained majority whip, and Rep. Leslie Arends of Illinois was minority whip.

The record of Congress was one of willingness to accept a far-reaching program of world cooperation, but to balk Administration proposals for legislation to meet rising postwar problems at home. This resulted from the existence of near unity on President Roosevelt's foreign policy, and the continuance under President Truman of a serious split, not only between Democrats and Republicans, but also between factions of the Democratic members of both houses, that had baffled Mr. Roosevelt in recent years on domestic issues. While President Roosevelt in his fourth-term election had carried substantial Democratic majorities into both Houses, Administration support continued to be weakened by frequent coalition of Southern Democrats and Republicans.

The first manifestation of this coalition was a surprise attack on the Administration on the first day of the session. The House unexpectedly voted, 207 to 186, to make permanent the special Committee on Un-American Activities, previously headed by ex-Rep. Martin Dies of Texas, and opposed by the Administration for six years. Seventy Democrats, 63 from Southern States, joined 137 Republicans for the measure introduced by Rep. John Rankin of Mississippi.

The next major instance of Democratic fence climbing arose over President Roosevelt's appointment of former Vice President Wallace to succeed Jesse Jones, Secretary of Commerce and director of the Federal Loan Agency. In order to make room in his new Administration for Mr. Wallace, who despite being dropped from the 1944 Democratic ticket, worked vigorously for its election, Mr. Roosevelt on Jan. 20, Inauguration Day, asked

Mr. Jones to step aside. The President explained in a letter that because of his loyalty "Henry Wallace deserves almost any service which he believes he can most satisfactorily perform," and that Wallace had asked for the Commerce post.

During the campaign, Mr. Wallace had been the outstanding spokesman for the Roosevelt New Deal policies, and had worked closely with the Political Action Committee of the Congress of Industrial Organizations. Opposition to confirming his Cabinet appointment, which carried with it the vast loan powers of the Reconstruction Finance Corporation, rose instantly and violently in the conservative elements of both parties. This opposition caused the appointment to be rejected, 5 to 14, by the Senate Commerce Committee Jan. 26.

Meanwhile, Sen. Walter F. George of Georgia introduced a bill divorcing the Government's lending agencies from the Commerce Department, and not until both Houses had passed that legislation and the President had signed it on Feb. 28, did the Senate conclude six weeks of bitter debate by confirming Mr. Wallace, 56 to 32.

The Southern Democratic-Republican coalition also rejected the Roosevelt appointment of Aubrey Williams, former head of the National Youth Administration, as Rural Electrification Administrator, 52 to 36, on Mar. 24. Claude R. Wickard, retiring Secretary of Agriculture, was subsequently appointed and confirmed as RE chief.

Finances. President Roosevelt in his budget message Jan. 4 recommended an \$83,000,000,000 budget for 1945-46, a substantial drop from the previous year. But with war activities still in full swing—although little in war plants remained to be built—he recommended that the statutory limit of the public debt be increased from \$260,000,000,000 to \$300,000,000,000. He estimated that the debt would reach \$292,300,000,000 by June 30, 1946. Congress approved the increase April 3, but beginning with V-E Day, war spending diminished and on Dec. 31, the public debt had climbed only to \$258,700,000,000.

War hostilities ended six weeks after the opening of the present fiscal year, but war activities—demobilization, occupation of former enemy territory, mustering-out pay, and other items—continued to account for three-fourths of federal expenditures, about \$50,000,000,000 out of a total outlay for the year ending June 30, 1946 of \$66,000,000,000. Revenues were estimated at \$36,000,000,000, about 55 per cent of expenditures.

Proposals for tax reduction, to encourage private enterprise during reconversion, were heard in Congress immediately after the defeat of Germany. But President Truman on May 15 said there could be no decrease in levies until after Japan were defeated. However, a tax adjustment act to make \$5,500,000,000 in refunds and tax credits available to business in the next two years was approved July 31.

After V-J Day President Truman recommended in his Sept. 6 message to Congress a "transitional tax bill," and Secretary of the Treasury Vinson proposed a \$5,000,000,000 reduction program for 1946. Congress in the large incorporated these suggestions in its new tax measure, but, as signed by Mr. Truman Nov. 8, the bill ordered repeals and reductions of taxes estimated at \$5,920,000,000.

The bill went through Congress in less than a month, passing the House, 343 to 10, on Oct. 11, and the Senate by a voice vote Oct. 24. Most of the controversy centered around amounts of relief to be accorded business and whether, and how many,

individual taxpayers should be exempted from income taxes. The act repealed the controversial excess profits tax on corporations, and reduced the regular corporation income tax from two to four per cent, depending on the size of income. The total tax relief for business was estimated at \$3,300,000,000. It relieved 12,000,000 persons of payments altogether by making the exemption for the three per cent "normal" tax identical with exemptions for surtax purposes. It repealed the \$5 automobile use tax, effective July 1, 1946, and froze Social Security taxes at the present one per cent each on employers and employees.

Other Legislation. Many of the measures taken up by Congress have already been discussed under "The Home Front" and "Foreign Relations," but major action completed during the first session, outside taxation and finance, is summarized here to show the record.

The Senate ratified the United Nations charter on July 28, and Congress approved an act authorizing participation in UNO by a U.S. delegation on Dec. 18.

Participation in the Bretton Woods monetary proposals was approved in a bill signed by President Truman on Aug. 4.

The Selective Service Act was extended to May 15, 1946 in a bill approved by Mr. Truman May 9.

A renewed price control act, extending the life of OPA to June 30, 1946, was signed by the President on June 30.

The Trade Agreements Act was extended until 1948, with authority included for additional tariff cuts in a bill approved July 5.

Current appropriations of \$3,100,000,000 for the shipbuilding program of the U. S. Maritime Commission, and an additional \$1,165,000,000 of contract authorizations were cancelled in a bill approved by Mr. Truman May 29. Nearly completed legislation at the end of the year provided for the sale of some 5,000 government-owned merchant vessels in the next two years.

A rescission bill, cutting \$51,800,000,000 from funds appropriated for war was approved by Congress in December, and met Presidential veto because it contained a rider forcing the Administration to return the U. S. Employment Service back to the States within 100 days. Mr. Truman stated, however, that he approved the economy features of the bill, and would secure the savings through use of his executive war powers.

Congress appropriated \$550,000,000 to complete payment on the U. S. share for UNRRA on Dec. 5, and on Dec. 17 completed action on a second contribution of \$1,350,000,000 for UNRRA's use in 1946.

The Special War Powers Act was extended in December for six months (President Truman had asked for a year's extension) through June 30, 1946.

A bill providing for government reorganization, requested by Mr. Truman, and for closer control of government corporations was approved Dec. 13.

A bill providing new inducements for Army and Navy enlistments was approved Oct. 6.

An estimated \$8,000,000,000 worth of loan and educational provisions were contained in a bill liberalizing the GI Bill of Rights. It was approved Nov. 8.

A bill authorizing \$160,000,000 to transfer 100,000 temporary dwelling units from war production centers to communities needing them for returning veterans and their families was quickly approved by Congress just before its December adjournment.

President Truman, who had been a member of the Senate from 1935 to 1945, pursued a policy of

cooperation between the White House and Congress. This "good will" produced results for him through the spring and summer, but it began to lag after V-J Day, when Mr. Truman pressed for action on the domestic proposals outlined in his Sept. 6 message. These proposals in the main were intended to put into effect the "Economic Bill of Rights" enunciated before Congress by President Roosevelt first in 1944 and again in 1945.

The foundation of the Truman program was a Full Employment bill, providing for government public works to take up any slack in private employment. The bill passed the Senate, with many compromising amendments in September, but in December the House substituted an Employment-Production measure, so different from the Senate bill, that there was grave doubt of compromise that would be acceptable to the President.

Legislation to provide emergency unemployment compensation for displaced war workers was passed by the Senate, but shelved in the House Ways and Means Committee.

President Truman in a special message Dec. 6 asked Congress for authority to impose a 30-day "cooling off" period in labor disputes while a fact-finding board worked for settlement. Despite his request for action "before the Christmas holidays" because of existing and threatened strikes in key industries, consideration of the legislation was postponed until 1946.

Other reconversion-postwar measures for which the President had asked, but upon which Congress had not acted as the year ended, included legislation to increase minimum wage rates from 40 cents an hour to 65 cents; to establish price ceilings for housing; to liberalize the Social Security Act; to make permanent the Fair Employment Practices Commission; to adopt a program of general housing and health, including compulsory health insurance; to control atomic energy; to provide for universal military training; to unify the armed services; and to establish a new plan of Presidential succession.

Merging Armed Forces. A Presidential request for universal training—training about 700,000 youth a year at a cost estimated at \$1,750,000,000—and the problem of appropriating funds for the postwar Army and Navy were sidetracked temporarily by Congress while it considered proposals from the War Department for merging the nation's land, sea and air forces.

Before the Senate Military Affairs Committee, conducting hearings on the Army's plan to unite the Army, Navy and Air Corps under a new department of the armed services, Gen. Dwight D. Eisenhower, later appointed Army Chief of Staff, said on Nov. 16 that consolidation was necessary to provide a well-rounded program of defense. "It is not feasible to arrive at the size of composition of each arm without simultaneously considering the others," he said. "There is absolute need for economy in administration if we are, as a Nation, to afford an adequate security establishment."

This plan was vigorously attacked by leading Navy officials, including Secretary Forrester, who testified that the Navy's record in the war just completed demonstrated its efficiency and strength as a separate arm. They urged the merger be delayed, at least, while postwar military policy crystallized.

President Truman in a special message to Congress Dec. 19 urged action immediately to reorganize the armed services along the lines recommended by the War Department. He urged creation of a new Department of National Defense under a civilian secretary with Cabinet rank.

Pearl Harbor Investigation. Army and Navy boards had investigated the Pearl Harbor disaster of Dec. 7, 1941, but conflicts in their reports, released Aug. 29, prompted Congress to order a full public investigation by a joint committee of both Houses. Sen. Alben W. Barkley offered the resolution, which was unanimously adopted in both Houses, and he was later chosen chairman of the 10-member committee—three Democrats and two Republicans from each House.

The investigation opened Nov. 15, and voluminous testimony taken from ranking military officials, including General George C. Marshall, as well as minor figures directly involved in the attack, reviewed all previously known information connected with the story, and revealed some that was new. It was placed on the record for the first time that the United States had broken the highest Japanese code previously to Pearl Harbor, and continued to use it effectively through most of the war. Letters from Gen. Marshall to Gov. Thomas E. Dewey in the summer of 1944 requesting the latter not to reveal information he may have acquired about breaking the code during his campaign for the Presidency were also made public.

Political bickering between Democratic and Republican members of the Committee at times took the spotlight from the investigation itself. In the middle of the investigation committee counsel, headed by William Mitchell, resigned because of the prolonged proceedings. The committee was to have completed its work in December, but when less than half the scheduled witnesses had been heard at the holiday recess, both Houses voted an extension of time to February 15.

JAY WALZ.

UNIVERSITIES AND COLLEGES. With Japan's defeat and the relaxation of the war-effort manpower grip on all portions of the population, a national back-to-school movement began stretching the capacities of colleges and universities. The U.S. Office of Education estimated that civilian enrollments in higher educational institutions for October of the 1945 academic year represented a 25 per cent jump over the opening enrollment for the 1943-44 academic year. The peak year of enrollments was 1939-40, when 1,380,000 students were registered. In the fall of 1943 the number of civilian students in higher educational institutions was approximately 738,000, but by the fall of 1945 the number was 926,000. The fall enrollments of military personnel in the war year of 1943 and in 1945 were large, and the combined figures for military and civilian students slightly exceeded 1,000,000 both in 1943 and in 1945. Increases in fall enrollments of civilians since 1943, therefore, approximately equaled the losses during the same period.

The number of persons reported on resident instructional staffs (part-time and full-time) has not changed markedly. From 111,000 in 1939 there were an increase to 114,000 in 1941 and a drop to 106,000 in 1945.

Total educational and general expenditures of higher educational institutions increased steadily from \$522,000,000 in 1939 to an estimated \$697,000,000 for the school year 1944-45. The total amount budgeted for the year 1945-46 is estimated to be \$737,000,000.

These estimates are based upon returns from a sample of 235 higher educational institutions made in October, 1945. The 1945 statistics, matched with figures from the Biennial Survey reports for 1941 and 1943 from the same institutions, have been summarized in tables 1 and 2.

Fall Civilian Enrollments. Estimates for men and women for the 3 years, 1941, 1943, and 1945 appear in table 3 and include full-time and part-time students up to October 15, 1945.

Enrollment Trends. Changes in the 3 periods shown in table 3 for the various types of institutions are indicated in table 4. From this table it is clear that the smallest relative decrease, 1941-43, in fall civilian enrollments was in Negro institutions. Teachers colleges show the greatest relative re-

sumption of activity, 1943-45, but they occupy the lowest position for the entire period. Negro institutions were the only group showing an increase for the entire period, 1941-45.

First-Year Civilian Students. Approximately one-third of college students are in college for the first time. Statistics on such students indicate the rate of accession from secondary school to college. Table 5, which supplements table 3 by showing these figures reveals noticeable differences in the numbers of fall civilian students entering college for the first time during the three-year period reported and a marked superiority in the number of women over men for 1943 and 1945. In 1945, however, approximately 34 per cent of men students were those enrolled in college for the first time, whereas women students in the same category were 30 per cent of all women students enrolled.

Differences between Enrollment of Men and Women. Table 6 shows a decrease of 525,000 in fall enrollments, 1941-43. Most of this decrease, 491,000, was in the enrollment of men students, the number of women students decreasing by 34,000, chiefly among those who had previously attended college. During the period 1943-1945 the greatest numerical increase in enrollment was among women students, almost all of whom had been in college before. On the other hand the greatest percentage increase was in men, and this was especially so in the case of those entering college for the first time. The net result of the war period 1941-45 has been a decrease of 27 per cent, and in the fall of 1945 the registration of men students was still 53 per cent below that of the fall of 1941. In sharp contrast was the enrollment of women, which was 14 per cent greater than that of 1941, most of this increase occurring among those who had previously attended college.

Veterans in Colleges and Universities. Information from the Veterans Administration indicates that there was a decided increase during the fall of 1945

TABLE 1—ESTIMATED ENROLLMENT, STAFF, AND EXPENDITURES IN HIGHER EDUCATIONAL INSTITUTIONS, 1939-45

School Year	Fall Enrollment Civilian	Fall Enrollment Military	Number on Resident Instructional Staff (Part-time and Full-time)	Total Educational and General Expenditures
1939-40	1,360,000		111,000	\$522,000,000
1941-42	1,263,000		114,000	581,000,000
1943-44	738,000	294,000	108,000	632,000,000
1945-46	926,000	88,000	106,000	737,000,000

TABLE 2—ESTIMATED TOTAL EDUCATIONAL AND GENERAL EXPENDITURES OF HIGHER EDUCATIONAL INSTITUTIONS, BY TYPE OF INSTITUTION, BY YEAR

(In millions of dollars)

Type of Institution	1941-42	1943-44	1944-45	1945-46
All Institutions	580.6	631.8	696.8	737.3
Univ., Colleges, Professional Sch's	500.6	550.5	603.8	634.9
Under public control	241.2	260.7	272.5	299.5
Under private control	219.9	244.2	285.1	285.6
Prof'n'l & Technical Sch's (private)	39.5	45.6	46.2	49.8
Teachers Col. (public & private)	38.8	41.6	45.2	49.8
Junior Col. & Normal Schools	29.0	25.6	29.0	32.7
Under public control	17.9	14.1	13.6	16.1
Under private control	11.1	11.5	15.4	16.6
Negro Institutions	12.2	14.1	18.8	19.9

TABLE 3—ESTIMATED FALL CIVILIAN ENROLLMENTS IN HIGHER EDUCATIONAL INSTITUTIONS, BY TYPE OF INSTITUTION, BY YEAR, AND BY SEX

(In thousands)

Type of Institution	Number of Institutions	Fall of 1941			Fall of 1943			Fall of 1945		
		All	Men	Women	All	Men	Women	All	Men	Women
All institutions	1554	1,263	765	498	738	274	464	926	360	566
Universities, colleges and professional schools	892	1,011	653	358	587	241	346	738	311	427
Publicly-controlled universities, colleges and professional schools	138	463	296	167	260	100	160	325	133	192
Privately-controlled universities and colleges	563	485	306	179	289	115	174	364	146	218
Privately-controlled professional and technical schools	191	63	51	12	38	26	12	49	32	17
Teachers colleges (publicly and privately controlled)	179	102	39	63	49	7	42	64	13	51
Junior colleges (and normal schools)	385	111	58	53	66	19	47	80	26	54
Publicly controlled	199	80	46	34	43	14	29	52	19	33
Privately controlled	186	31	12	19	23	5	18	28	7	21
Negro institutions	98	39	15	24	36	7	29	44	10	34

TABLE 4—ESTIMATED INCREASE AND DECREASE IN FALL CIVILIAN ENROLLMENT BY TYPE OF INSTITUTION, 1941-1945

(Amounts in thousands)

Type of Institution	Fall 1941 to Fall 1943		Fall 1943 to Fall 1945		Fall 1941 to Fall 1945	
	Amount	Percent	Amount	Percent	Amount	Percent
All institutions	-525	-42	+188	+25	-337	-27
Universities, colleges and professional schools	-424	-42	+151	+26	-273	-27
Publicly-controlled universities, colleges and professional schools	-203	-44	+65	+25	-138	-30
Privately-controlled universities and colleges	-196	-40	+75	+26	-121	-25
Privately-controlled professional and technical schools	-25	-40	+11	+29	-14	-22
Teachers colleges (publicly and privately controlled)	-53	-52	+15	+31	-38	-37
Junior colleges (and normal schools)	-45	-41	+14	+21	-31	-28
Publicly controlled	-37	-46	+9	+21	-28	-35
Privately controlled	-8	-26	+5	+22	-3	-10
Negro institutions	-3	-08	+8	+22	+5	+13

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Enrollment, 1944-45				Student Aid 1944-45 ^c	Endowment ^d	Gifts and Grants 1944-45	Value of Plant
				Total	Men	Women	Graduate Students ^b				
Alabama											
Alabama, Univ. of, University	State	1820	Raymond R. Patv.	4,500	1,542	2,958	67	\$ 96,500	\$ 1,174,653	\$48,182	\$8,863,024
Alabama Coll., Montevallo	State	1896	Arthur Fort Harman	668	668			25,300	591,122		2,500,000
Alabama Polytechnic Inst., Auburn	State	1872	L. N. Duncan	2,873	1,718	1,155	94	4,000	594,102	12,000	4,748,574
Birmingham-Southern Coll., Birmingham	Methodist	1856	Geo. R. Stuart	645	225	422		10,739	574,896	114,804	2,247,000
Howard Coll., Birmingham	Baptist	1842	May Harwell G. Davis	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Huntsdon Coll., Montgomery	Methodist	1854	Hubert Searcy	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Judson Coll., Marion	Baptist	1838	J. I. Ruddle	273	273			3,864	525,858	53,567	679,666
Spring Hill Coll., Spring Hill	Catholic	1830	W. D. O'Leary	33	33	265		12,500	220,000	113,992	2,012,058
State T. C., Florence	State	1872	J. A. Keller	38	440	388		125,191	...	...	2,010,000
State T. C., Jacksonville	State	1833	Houston Cole	(u)	(u)	(u)	(u)	(u)	(u)	85,662	728,437
State T. C., Livingston	State	1883	W. W. Hill	15	103	103	0	5,910	...	...	1,044,040
State T. C., Montgomery [N.]	State	1874	H. Council Trenholm	118	155	2,191	100	1,780	249	(u)	(u)
State T. C., Troy	State	1887	C. B. Smith	2,346	(u)	(u)	(u)	6,000	1,186,638	61,521	1,318,625
Talladega Coll., Talladega [N.]	Private	1867	A. D. Bettel	256	37	219	(u)	32,469	7,101,324	122,983	5,440,143
Tuskegee Inst., Tuskegee [N.]	Private	1881	Fredrick D. Patterson	1,441	491	950	12	853	...	500	1,000,000
Univ. of Alaska, College	Territorial	1922	Charles E. Bunnell	22	149	92		2,000	...	...	...
Arizona											
Arizona, Univ. of, Tucson	State	1885	Alfred Atkinson	4,092	1,437	2,655	69	25,410	1,664,774	2,450	6,330,497
State T. C., Flagstaff	State	1899	Tom O. Bellwood	38	141	121	18	207	...	199,000	1,500,000
State T. C., Tempe	State	1885	Grady Gamme	738	154	584	81	366	...	...	2,066,000
Arkansas											
Arkansas Univ. of Fayetteville	State	1871	Arthur M. Harding	2,404	1,317	1,087	165	10,000	132,968	...	7,262,645
Arkansas A. and M. Coll., Monticello	State	1909	Marvin Bankston	(u)	(u)	(u)	(u)	(u)	...	(u)	(u)
Arkansas State Coll., Jonesboro	State	1910	H. E. Thompson	37	2,007	803	771	13,926	250,000	...	3,275,423
Henderson State T. C., Arkadelphia	State	1929	(u)	(u)	(u)	(u)	(u)	(u)	723,997	50,304	908,640
Hendrix Coll., Conway	Methodist	1884	Matt L. Ellis	36	291	87	204	13,822	575,000	55,000	926,000
Ouachita Coll., Arkadelphia	Baptist	1886	Jas. R. Grant	687	322	365	287	22,940	(u)	(u)	(u)
State T. C., Conway	State	1907	Nolen M. Irby	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
California											
California, Univ. of, Berkeley	State	1868	Robert Gordon Sproul	23,740	8,127	15,613	2,451	94,946	35,054,000	687,014	61,531,878
California Inst. of Technology, Pasadena	Private	1891	Robert A. Millikan	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Chapman Coll., Whittier	Disc. of Christ	1860	George N. Reeves	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Dominican Coll. of San Rafael, San Rafael	Catholic	1890	Sister M. Thomas	38	474		238	2,400	...	...	1,901,116
Fresno State Coll., Fresno	State	1911	Frank W. Thomas	1,634	355	1,279	11	485	1,129,000	6,323	966,000
George Pepperdine Coll., Los Angeles	Private	1937	Hugh M. Thier	43	732	163	10	249	...	...	...
Holy Names Coll. of the, Oakland	Catholic	1880	Sister M. R. Emmanuela	38	345		6	12,800	53,875	62,100	880,000
Immaculate Heart Coll., Los Angeles	Catholic	1916	Sister Mary Eucharis	36	633		268	11,500	...	...	850,000
Loyola Univ. of Los Angeles, Los Angeles	Catholic	1865	Edward J. Whelan	48	489	27	85	...	...	...	4,719,906
Medical Evang. Coll., Loma Linda & Los Angeles	Adventist	1909	Walker E. Macpherson	65	396	35	106	102,928	2,423,069	18,364	3,308,828
Mills Coll., Oakland	Private	1852	Lynn T. White, Jr.	1,154	89	636		22,841	1,239,266	58,498	2,488,648
Mount Saint Mary's Coll., St. Mary's Coll.	Catholic	1925	Mother M. de Lourdes	(u)	(u)	(u)	(u)	(u)	571,292	32,093	1,277,740
Occidental Coll., Los Angeles	Presbyterian	1897	Rensens DuBois Burd	68	1,158	572	586	107	299	32,310	736,428
Pacific Coll. of the, Stockton	Methodist	1851	Tully C. Knoles	62	732	475	207	20,385	4,092,789	234,832	3,852,179
Pacific Union Coll., Angwin	Adventist	1909	H. J. Klooster	49	826	426	400	144	25,120	227,689	2,156,398
Pomona Coll., Claremont	Private	1887	E. Wilson Lyon	70	831	171	516	76	2,509,448	...	2,100,000
Pomona Coll., Claremont	Private	1907	George H. Armacost	67	1,169	523	646	45	...	...	2,100,000
St. Mary's Coll. of Calif., St. Mary's Coll.	Catholic	1863	Brother Austin	21	132	132	26	...	...	...	2,100,000
San Diego State Coll., San Diego	State	1897	Walker R. Hepner	63	2,188	429	1,759	416	...	...	2,688,342
San Francisco, Univ. of, San Francisco	State	1855	William Leonor Mejia	39	604	428	176	...	...	...	3,000,000
San Francisco Coll. for Women, San Francisco	Catholic	1890	Mother Leonor Mejia	37	580		16	...	...	...	1,692,830
San Jose State Coll., San Jose	State	1899	J. Paul Leonard	64	1,955	241	580	1,500	...	...	2,846,582
San Jose State Coll., San Francisco	State	1862	T. W. MacQuarrie	120	2,963	524	2,439	12,000	...	...	2,000,000
Santa Clara, Univ. of, Santa Clara	Catholic	1851	William C. Ghanera	41	216		...	13,003	954,988	30,908	2,019,291
Scripps Coll., Claremont	Private	1926	Frederick Hard	26	233		...	58,440	1,600,000	577,000	11,091,240
Southern California, Univ. of, Los Angeles	Private	1879	R. B. von Klen-Smidt	850	13,071	6,468	1,594	83,740	35,446,285	3,400,000	19,799,060
Stanford Univ., Stanford University	Private	1885	Donald B. Phipps	687	3,726	2,642	1,084	...	...	...	...

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty	Enrollment, 1944-45				Student Aid 1944-45	Endowment 1944-45	Gifts and Grants 1944-45	Value of Plant
					Total	Men	Women	Graduate Students				
Whittier Coll., Whittier	Friends	1901	William C. Jones	41	575	115	460	10	295	\$21,971	\$ 693,774	\$ 690,693
Colorado												
Adams State Coll., Alamosa	State	1921	Ira Richardson	25	247	31	216	6	281	35,126	1,361,501	790,000
Colorado Univ., Boulder	State	1876	Robert L. Stearns	331	5,916	2,233	3,683	443	169	900,710	11,244,011	11,244,011
Colorado School of Mines, Golden	Private	1874	Thurston F. Doolbaugh	60	2,210	1,040	1,170	1	75	2,877,703	46,042	2,019,526
Colorado State Coll. of A. and M. Arts, Fort Collins	State	1870	Roy M. Green	166	1,306	638	668	171	570	567,941	.....	5,177,677
Colorado State Coll. of Educ., Greeley	State	1890	George Willard Fraser	844	2,033	366	1,667	648	1,257	.....	.....	3,341,125
Denver Univ., Denver	Methodist	1864	Ben M. Cherrington	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	1,200,000
Loretto Heights Coll., Loretto	Catholic	1891	Paul J. Ketrington	42	526	..	526	..	173	..	.....	1,200,000
Western State Coll., Gunnison	State	1911	C. C. Casey	31	194	48	146	43	317	5,200	147,000	1,000,000
Connecticut												
Albertus Magnus Coll., New Haven	Catholic	1925	Sister Mary Samuel	35	332	..	332	..	127	25,568	5,841	624,196
Connecticut Coll., New Britain	State	1849	H. D. Wells	80	606	135	471	..	359	5,186	7,998	1,030,293
Connecticut Univ., Storrs	State	1881	A. N. Jorgensen	231	5,636	2,719	2,917	102	235	16,738	307,295	11,724,540
St. Joseph Coll., West Hartford	Catholic	1932	Dorothy Schaffer (i)	100	985	..	985	..	280	14,776	110,458	5,027,007
State T. C., Danbury	State	1904	Ralph C. Jenkins	43	158	0	158	0	45	10,000	39,000	1,213,000
State T. C., New Haven	State	1893	E. Ward Ireland	100	1,462	135	1,327	72	143	1,900	..	750,000
State T. C., Willimantic	State	1889	George H. Shafer	42	384	5	105	224	50	..	..	150,000
Trinity Coll., Hartford	Private	1823	G. Keith Funston	41	115	115	..	3	60	11,930	3,797,882	600,000
U. S. Coast Guard Academy, New London	Federal	1876	Rear Admiral James Pine	42	325	325	..	..	..	Federal	39,617	1,034,100
Wesleyan Univ., Middletown	Private	1831	Victor L. Butterfield	75	370	..	..	10	..	23,356	8,786,262	6,000,000
Yale Univ., New Haven	Private	1701	Charles Seymour	1,012	5,240	4,442	798	624	..	527,797	1,313,989	68,700,000
Delaware												
Delaware Univ., Newark	State	1833	W. Orven Sypherd	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
District of Columbia												
American Univ., The	Methodist	1891	Paul F. Douglass	143a	3,319	1,163	2,156	1,142	656	..	917,654	3,388,828
Catholic Univ. of America	Catholic	1887	Patrick J. McCormick	253	2,227	1,269	958	1,204	3,181	..	28,150	3,388,828
Dumbarton Coll. of Holy Cross	Catholic	1935	Sister Mary Frederick	25	213	..	213	..	66	..	746,509	4,146,802
Georgetown Univ.	Catholic	1789	Lawrence C. Gorman	350	1,506	1,243	263	132	1,400	38,500	200	807,489
George Washington Univ.	Private	1821	Cloyd Heck Marvin	423	10,010	4,437	5,573	1,284	2,594	3,387,650	7,245	9,344,490
Howard Univ. [N.]	Private	1867	Mordecai Wyatt Johnson	261	4,628	1,712	2,916	632	249	2,519,696	302,006	6,000,000
James Ormond Wilson T. C.	Municipal	1873	Walter E. Hager	47	706	41	665	..	..	1,039,371	53,000	7,815,909
Miner T. C. [N.]	Municipal	1854	Eugene A. Clark	50	490	18	472	116	125	..	204,801	760,000
Trinity Coll.	Catholic	1897	Sister Catherine Dorothea	56	478	..	478	..	..	530,531	..	304,689
Washington Missionary Coll., Takoma Park	Adventist	1904	Benj. G. Wilkinson	39	508f	193	315	..	217	..	52,477	2,500,000
Florida												
Florida Univ. of Gainesville	State	1853	John J. Tigert	234	938	892	46	86b	1,230	..	3,005,493	10,352,474
Florida A. and M. Coll. for Negroes, Tallahassee	State	1887	William H. Gray, Jr.	124	905	148	757	..	2,117	..	45,827	1,463,755
Florida Southern Coll., Lakeland	Methodist	1895	Ludd M. Spivey	66	768	180	628	..	350	965,000	100,000	2,000,000
Florida State Coll. for Women, Tallahassee	State	1905	Doak S. Campbell	208	2,387	2,387	..	21	1,153	8,640	706,206	2,238,479
John B. Stetson Univ., DeLand	Baptist	1926	William Sims Allen	60	581	126	455	11	15,000	1,000,000	179,000	2,000,000
Miami Univ. of Coral Gables	Private	1926	B. F. Ashe	76	1,307	585	722	73	968	28,738	311,573	1,627,313
Rollins Coll., Winter Park	Private	1885	Hamilton Holt	58	408	74	334	..	130	33,970	71,822	1,773,485
Georgia												
Agnes Scott Coll., Decatur	Private	1889	James Ross McCann	63	542	..	542	285	721	10,655	2,502,440	330,000
Atlanta Univ., Atlanta [N.] (g)	Private	1867	R. E. Clement	25	285	30	255	..	..	6,675	4,036,968	1,965,395
Brenau Coll., Gainesville	Private	1878	Haywood J. Pearce	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Clark Coll., Atlanta [N.]	Methodist	1820	James P. Brawley	36	626	134	492	187b	1,678	52,164	676,456	828,175
Emory Univ., Emory University	State	1836	Goodrich C. White	325a	2,547	675	675	187b	1,678	8,913,983	854,921	10,927,177
Fort Valley St. Coll., Fort Valley	State	1895	Horace Mann Bond	36	402	49	353	862	5,128	34,529	125,315	528,869
Georgia Univ. of Athens	State	1785	Harmon W. Caldwell	200	2,297	736	1,561	108	1,379	1,060,537	23,212	7,799,054
Georgia School of Technology, Atlanta	State	1885	B. R. Van Leer	130	2,058	2,058	..	8	1,531	68,500	133,000	6,090,000
Georgia State Coll., Industrial College [N.]	State	1889	Benj. F. Hubert	44	404	65	339	..	856	19,021	..	650,000
Georgia State College for Women, Milledgeville	State	1889	Guy H. Wells	101	1,039	8	1,039	..	488	..	..	2,000,000
Georgia State Woman's College, Valdosta	State	1906	Frank R. Read	26	373f	8	365	..	142	807,229
Georgia T. C., Collegeboro	State	1908	M. S. Pittman	32	249f	67	182	..	390	686,855

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Mercer Univ., Macon	Baptist	1833	Spright Dowell	40	517	242	275		\$ 14,550	\$ 1,950,485	\$ 544,699	\$1,235,321
Morehouse Coll., Atlanta [N] (g)	Baptist	1867	Benjamin E. Mays	61	377	377		583	10,662	1,487,625	23,558	333,635
Morris Brown Coll., Atlanta [N]	Methodist	1881	W. C. Fountain, Jr.	37	594	132	462		16,958	238,129	144,597	389,841
Paine Coll., Augusta [N]	Methodist	1882	E. C. Peters	29	296	40	256		5,601	35,000	59,071	408,239
Shorter Coll., Rome	Baptist	1873	Paul M. Cousins	25a	228		228		17,000	522,545	101,000	500,000
Spelman Coll., Atlanta [N] (g)	Baptist	1881	Florence M. Read	44a	471		471		4,712	3,178,445	38,939	923,566
Wesleyan Coll., Macon	Methodist	1836	Nennen C. McPherson, Jr.	63	641		641		34,362	958,791	264,210	2,622,681
Hawaii, Univ. of, Honolulu	Territorial	1907	Gregg M. Sinclair	123	3,553	2,284	1,269	145	862	42,316	1,278,755	3,938,659
Idaho												
Albion State Normal School, Albion	State	1893	R. H. Snyder	20	(u)	11	82	(u)	80	235,000	(u)	801,166
Idaho, Univ. of, Moscow	State	1889	Harmon C. Dale	130	952	270	682	41	231	4,489,000		3,100,000
Idaho, Coll. of, Caldwell	Presbyterian	1891	William W. Hall, Jr.	25	224	67	157		1,500	522,000	25,000	500,000
Lewiston State Normal School, Lewiston	State	1893	Glenn W. Todd	29	233	24	209		3,747	134,971		1,045,000
Northwest Nazarene Coll., Nampa	Nazarene	1913	L. T. Corlett	24	442	120	322	6	81		26,897	358,474
Illinois												
Art Inst. of Chicago, School of, Chicago	Private	1879	Hubert Ropp	50	3,683	702	2,981		434	1,455,243	67,650	1,626,085
Augsburg Coll., Theological Sem., Rock Island	Lutheran	1860	Conrad J. I. Bergendoff	50	965	399	566	119	166	100,000	18,451	477,000
Aurora Coll., Aurora	Advent Chr.	1893	Theodore P. Stephens	25a	138	40	98		35	73,823	32,230	269,782
Barat Coll. of the Sacred Heart, Lake Forest	Catholic	1904	Rev. M. Regan	25	203		203		60		60,000	950,840
Bradley Polytechnic Inst., Peoria	Private	1897	Frederic R. Hamilton	55	1,020	521	1,099	13	402	2,409,968	82,924	1,368,644
Carthage Coll., Carthage	Lutheran	1870	Erland Nelson	20	182	63	119		7,409	744,012	61,837	591,600
Central Y. M. C. A. Coll., Chicago	Y. M. C. A.	1919	W. D. Gilliland (e)									
Chicago, Univ. of, Chicago	Private	1891	Robert Maynard Hutchins	918	9,250	3,269	5,981	4,038	3,343	406,702	2,361,944	45,458,156
Chicago Musical College, Chicago	Independent	1867	Rudolph Ganz	81a	2,086	519	1,567		3,500	2,000,000		5,000,000
Chicago T. C., Chicago	Municipal	1897	John A. Barky	54	962	52	910		211		5,000	2,028,117
De Paul Univ., Chicago	Catholic	1898	Comerford J. O'Malley	237	6,016	1,651	4,465	429	2,853	47,000		2,028,117
Eastern Illinois State T. C., Charleston	State	1895	Robert G. Buzzard	74	597	82	265		15,443	215,299	71,729	1,197,303
Elmhurst Coll., Elmhurst	Ev. & Ref.	1871	Timothy Lehmann	28	304	129	175		11,875	224,023	74,167	1,141,402
George Williams Coll., Chicago	Private	1867	Harold C. Coffman	36a	181	64	117	33	1,965	1,862,850d	2,049,668	892,127
Illinois, Univ. of, Urbana	State	1829	A. C. Willard	2,118a	12,571	6,957	5,614	1,185b	3,845b	136,127c	32,681	4,787,830
Illinois Coll. of Technology, Chicago	Presb. & Cong.	1892	H. C. Hudson	18a	93	36	57		9,196	1,804,772	698,972	2,715,848
Illinois State Normal Univ., Normal	State	1857	Henry Townley Heald	170a	3,857	3,578	279	377	43,491	1,562,000	340,000	875,000
Illinois Wesleyan Univ., Normal	Methodist	1850	R. W. Fairchild	181	1,832	502	1,330	43	799	22,312	508,717	4,787,830
James Millikan Univ., Decatur	Presbyterian	1901	William E. Shaw	45	504	142	362	17	27,330	1,031,093	31,000	1,189,145
Knox Coll., Galesburg	Presbyterian	1837	Carter Davidson	59	676	333	343		5,807	2,677,334	166,102	1,782,028
Lake Forest Coll., Lake Forest	Presbyterian	1837	Ernest A. Johnson	23	526	127	399		7,479	1,355,099	16,073	1,553,155
Loyola Univ., Chicago	Catholic	1870	James T. Husey	825	4,866	2,087	2,779	383	1,644	1,058,940	10,982	5,542,312
MacMurray Coll. for Women, Jacksonville	Methodist	1846	Clarence P. McClelland	69	908		708	14	186	80,476	3,749,096	123,525
Monmouth Coll., Monmouth	Presbyterian	1853	James H. Grier	47	758	443	315		11,842	1,920,820	135,000	1,307,665
Mundelein Coll., Chicago	Catholic	1929	Sister Mary Josephine	82	1,103		1,103		72	19,650	1,611	2,720,028
National Coll. of Education, Evanston	Private	1886	Edward Dean Baker	46	721		721		363	133,977	74,033	1,000,014
Northern Illinois State T. C., DeKalb	State	1895	Karl L. Adams	34	485	168	317		98	1,092,198	22,194	1,415,704
Northern Western Univ., Evanston	Private	1831	Franklin B. Snyder	68	866	105	450		311	60,500,000	457,790	1,878,964
Principia Coll., The Elkhart	Private	1898	Frederic E. Morran	30	281	51	230		16,030	744,234	28,962,000	28,962,000
Rockford Coll., Rockford	Private	1847	Mary Ashby Cheek	38a	472	472			16,030	148,192	148,192	3,203,694
Rosary Coll., River Forest	Catholic	1925	Sister Mary Peter	68	724	2	722		508	1,000,000	26,243	1,000,000
Saint Francis, Coll. of, Joliet	Catholic	1901	Sister Mary Aneta	39	705	0	705	0	24,020	1,000,000	1,420	1,923,000
St. Francis Xavier Coll. for Women, Chicago	Catholic	1912	Sister Mary Huberta	45a	590		590		0	16,000	5,794	1,879,000
Southern Illinois Normal Univ., Carbondale	State	1869	Chester F. Lay	127	2,275	557	1,718	49	735	634,007	2,255	1,460,027
Western Illinois State T. C., Macomb	State	1899	F. A. Beu	80	207	970	1,177	33	676	47,705	1,995,997	1,995,997
Wheaton Coll., Wheaton	Private	1853	V. Raymond Edman	100a	2,061	746	1,315	58	727	706,600	136,900	1,772,500
Indiana												
Ball State T. C., Muncie	State	1918	W. E. Waggoner	95	1,342	210	1,132	96	492	530,061	3,618	5,320,281
Butler Univ., Indianapolis	Disc. of Christ.	1855	M. O. Ross	74	1,857	606	1,251	379	666	3,000,000		3,451,000
DePaul Univ., Greencastle	Methodist	1837	Clyde E. Wildman	105a	1,714	744	970	3	688	6,009,103	20,005	3,575,833

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Earlham Coll., Richmond	Friends	1847	William Cullen Dennis	37a	360	99	261	0	\$ 17,041	\$1,438,444	\$ 33,800	\$ 812,175
Evansville Coll., Evansville	Methodist	1854	Lincoln Bell Hale	52a	1,187	527	660	250	6,884	400,000	241,810	715,428
Franklin Coll., Franklin, Mo.	Baptist	1834	William Gear Spencer	28	225	69	156	38	15,050	1,139,500		685,000
Goshen Coll., Goshen, Ind.	Methodist	1894	Ernest E. Miller	28a	397	135	262	13		185,653	77,170	280,420
Hanover Coll., Hanover, Ind.	Presbyterian	1827	Albert George Parker, Jr.	107	1,175	28	1,147	50	7,600	1,938,800	170,000	815,200
Indiana State T. C., Terre Haute (u)	State	1865	Ralph N. Tiery	193	1,890	664	919	150	2,572	547,517	200,221	6,191,813
Indiana Univ., Bloomington	State	1820	Herman B. Wells	376	6,825	3,014	3,811	1,298	95,171	2,856,667	69,799	21,116,913
Manchester Coll., North Manchester	Brethren	1869	V. F. Schwalm	30	410	95	315	(u)	35,486	595,159	(u)	717,986
Notre Dame, Univ. of Notre Dame	Catholic	1864	J. Hugh O'Donnell	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Purdue Univ., Lafayette	State	1869	Edward C. Elliott	22	1,126	107	1,019	(u)	3,100	2,300,000	300,000	683,000
Rose Polytechnic Inst., Terre Haute	Private	1874	Donald B. Prentice	49	1,126	363	763	(u)	6,764	461,501	68,400	2,429,804
St. Mary-of-the-Woods Coll., St. Mary	Catholic	1840	Thomas M. Madeleva	60a	597	178	419	50	12,230	492,155	206,379	1,439,426
St. Mary's Coll., Notre Dame	Catholic	1859	Otto Paul Kretzmann	63a	597	178	419	50	30,377	2,517,000	303,112	936,378
Valparaiso Univ., Valparaiso	Lutheran	1859	Frank Hugh Sparks	25	283	283		(u)	1,905			
Wabash Coll., Crawfordsville, Ind.	Private	1832										
Central Coll., Pella, Ia.	Reformed	1833	H. W. Pietsen	27	290	102	188	50	10,761	400,619	59,242	538,629
Clarke Coll., Dubuque, Ia.	Catholic	1843	Sister Mary Ambrose	43a	661	342	319	16,371	16,371	234,848	49,198	1,296,252
Coe Coll., Cedar Rapids	Presbyterian	1881	Dessan C. Harve Geiger	55	430	68	362	1	35,483	1,816,679	37,227	1,308,949
Cornell Coll., Mount Vernon	Methodist	1853	Russell D. Cole	47	617	90	527	86	48,289	2,447,833	1,258,810	2,222,040
Drake Univ., Des Moines	Private	1881	Henry Gadd Harmon	98a	1,439	395	960	93	630	52,687	62,397	721,729
Dubuque Univ. of Dubuque	Presbyterian	1832	Dale D. Welch	45	697	340	255	102	28,409	730,533	83,500	2,315,684
Griener Coll., Grinnell	State	1846	Samuel N. Stevens	51	366	28	338	1,052	2,323	2,514,966	23,341,323	16,500,000
Iowa State Univ. of Iowa City	State	1847	Virgil M. Hancher	51a	9,988	4,432	5,556	39	49,745	1,194,123	760,439	23,341,323
Iowa State T. C., Cedar Falls	State	1838	Charles E. Friley	547	8,167	5,329	2,838	39	1,468	1,258,000	135,800	16,500,000
Iowa Wesleyan Coll., Mount Pleasant	State	1876	Malcolm Price	143	2,140	151	2,089	39	97b	558,104	19,847	817,420
Loras Coll., Dubuque (u)	Methodist	1842	Stanley B. Niles	28	245	53	189	97b	7,752	1,600,000	40,000	2,000,000
Lutheran Coll., Decorah	Catholic	1839	O. J. H. Preus	68	447	250	197	673	38,000	475,242	123,576	1,484,693
Morningside Coll., Sioux City	Lutheran	1861	Earl A. Roadman	33	301	83	218	169	54,613	563,035	74,403	455,431
Parsons Coll., Fairfield	Methodist	1875	Herbert Carleton Mavor	39	685	148	383	154	10,562	547,045	59,485	574,627
St. Ambrose Coll., Davenport (u)	Presbyterian	1882	Ambrose J. Burke	24	262	32	109	121	2,552	740,000	1,019,323	1,019,323
Simpson Coll., Indianola, Kansas	Catholic	1882	Edwin E. Voigt	70	1,457	832	402	223	11,219	1,401,426	141,234	589,391
Baker Univ., Baldwin	Methodist	1838	Nelson Parson Horn	30a	495	75	420	257	10,512	1,375,953	74,895	665,687
Bethany Coll., Lindsborg	Lutheran	1881	Emory K. Lindquist	30	233	92	241	38	6,194	434,371	28,870	535,147
Bethel Coll., North Newton	Methodist	1887	Ed C. Kaufman	27	198	43	155	57	11,000	369,246	102,851	568,856
Fort Hays Kansas State Coll., Hays	State	1901	Lyman Dwight Wooster	30	231	53	178	89	2,848	1,500,000	276,296	1,500,000
Kansas Univ. of Lawrence	State	1865	Deane W. Malott	300	845	249	743	13	603	256,000	2,221,182	10,038,319
Kansas State Coll., Manhattan	State	1863	M. S. Eisenhower	2,064	701	196	403	139	1,860	517,955	4,371,915	5,046,424
McPherson Coll., McPherson	State	1863	W. W. Peters	28	240	74	166	47	7,100	375,000	66,800	538,000
Marymount Coll., Salina	Brethren	1887	W. W. Peters	28	240	74	166	47	7,100	375,000	66,800	538,000
Mount St. Scholastica Coll., Atchison	Catholic	1922	Mother Mary Chrysostom	33	463	211	252	365	11,587			1,009,711
Ottawa Univ., Ottawa	Catholic	1924	Mother Lucy Dooley	40	693	693						726,062
St. Benedict's Coll., Atchison	Catholic	1864	Andrew B. Martin	23a	224	55	169	40	10,962	451,582	34,248	726,062
Saint Mary Coll., Xavier	Baptist	1838	Arthur M. Murphy	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Southwestern Coll., Winfield	Catholic	1932	Arthur M. Murphy	48	742	41	281	334	7,702	604,225	30,755	614,364
State T. C., Emporia	Methodist	1865	Mearl P. Culver	33	322	41	281	101	901	250,000	639,397	1,945,000
State T. C., Pittsburg	State	1863	James F. Price	91	1,334	399	935	23	700	6,580	193,870	2,750,000
State T. C., Pittsburg	State	1863	James F. Price	110	1,363	553	810	65	886	1,252,000	193,870	1,309,274
Washburn Municipal Univ. of Topeka	State	1905	Rees H. Hughes	67a	1,123	514	609	8	4,080	94,274	956,978	1,877,628
Wichita Municipal Univ. of Wichita, Kansas	Municipal	1926	Bryan Sewall Stoffer	70	930	301	629	39	550			
Wichita Municipal Univ. of Wichita, Kansas	Municipal	1926	W. M. Jardine	70	930	301	629	39	550			
Asbury Coll., Wilmore	Private	1890	Z. T. Johnson	26	623	170	453	130	3,000	716,000	66,000	1,500,000
Berea Coll., Berea	Private	1855	Francis S. Hutchins	98a	763	130	633		10,500	5,500,000	113,000	1,500,000
Centre Coll. of Kentucky, Danville	Presbyterian	1819	Robt. J. McMullen	23	204	48	156	46	4,355	1,844,342	31,074	1,050,697
Eastern Kentucky State T. C., Richmond	State	1906	W. F. O'Donnell	72	660	77	583	11	261	280,000	280,000	3,050,038
Georgetown Coll., Georgetown	Baptist	1829	S. S. Hill	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Kentucky Univ. of Lexington	State	1865	Herman Lee Donovan	350	3,156	868	2,288	496	30,000	190,693	125,239	9,086,346

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Kentucky State Coll., Frankfort [N]	State	1886	R. B. Atwood	(u)	4,750	2,580	2,170	204	(u)	\$1,138,000	\$ 56,000	\$2,884,000
Louisville Univ. of Louisville	Municipal	1837	E. W. Jacobson	12	226	27	199	81	1,407	...	38,493	187,448
Nazareth Coll., Louisville	Catholic	1920	Sister Mary A. Coad	58	1,221	1,221	1,221	81	530	...	5,210	592,000
State T. C., Morehead	State	1923	Wm. H. Vaughan	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
State T. C., Murray	State	1923	Jas. H. Richmond	74	629	100	429	22	210	(u)	254,000	2,500,000
Transylvania Coll., Lexington	Disciples	1780	L. A. Brown (e)	20	161	41	120	33	9,989	817,546	11,661	696,174
Union Coll., Barboursville	Methodist	1879	Conway Boatman	16	280	42	238	96	3,973	389,577	35,286	619,752
Western Kentucky State T. C., Bowling Green	State	1906	Paul L. Garrett	93	938	209	729	38	1,350	365,000	367,965	3,462,863
Centenary Coll. of Louisiana, Shreveport	Methodist	1825	Paul M. Brown	41a	803	178	625	281	7,189	471,514	18,425	1,207,333
Dillard Univ., New Orleans [N]	Cong. & Meth.	1830	Albert Walter Dent	30	262	32	230	...	5,496	3,009,043	113,943	1,432,699
H. Sophie Newcomb Memorial Coll., New Orleans	Private	1896	Logan Wilson	83	832	832	832	...	2,787,187	2,787,187	8,150	2,608,689
Louisiana Coll., Pineville	State	1894	Edgar Goddard	26	459	181	278	216	332,877	123,023	123,023	659,938
Louisiana St. U. & A. M. Coll., Baton Rouge	State	1860	W. B. Sherier	111	1,616	905	711	183	44,619	410,275	852,578	3,727,380
Loyola Univ., New Orleans	Catholic	1912	T. J. Shields	466	6,349	2,426	2,249	183	29,430	16,449	410,275	2,917,095
† Southern Univ., Coll. Natchitoches	State	1884	Joe Farrar	142	1,577	758	567	252	32,345	5,000,000	673,000	2,987,263
† Southern Univ., & A. M. Coll., Scotlandville [N]	State	1880	Felton G. Clark	116	1,367	779	888	526	44,941	...	3,500	3,730,000
† Tulane Univ. of Louisiana, New Orleans	State	1900	Joel Lafayette Fletcher	126	2,337	207	1,130	312	32,912	392,988	3,500	1,658,250
† Xavier Univ., New Orleans	Private	1834	Rufus Carrollton Harris	664	5,668	3,517	2,151	600	387	10,889,532	128,819	3,584,375
1925 Mother M. Agatha	Catholic	1925	Mother M. Agatha	63a	565	122	443	76	2,392	470,655	197,400	1,192,281
Bates Coll., Lewiston	Private	1864	Charles Franklin Phillips	44a	540	255	285	394	18,339	2,220,928	13,799	1,494,489
Bowdoin Coll., Brunswick	Private	1794	Kenneth C. M. Sills	55	327	327	327	196	23,946	8,320,484	143,679	8,835,046
Coddy Coll., Waterville	Private	1818	Julius Seelie Bixler	56	425	90	335	...	3,361,176	386,378	386,378	2,834,144
Maine, Univ. of Orono	State	1865	Arthur A. Hauck	124	1,365	409	976	17	460	1,175,400	362,912	5,185,090
Goethe Coll., Baltimore	Private	1885	David Allan Robertson	81	621	...	621	...	25,929	2,130,695	1,243,121	3,353,198
Hood Coll., Frederick	Evangelical	1893	Henry Irvin Stahr	49	473	...	473	...	825,473	825,473	19,951	1,438,289
Johas Hopkins Univ., Baltimore	Private	1876	Isaiah Bowman	784a	3,527	2,002	1,525	709b	163,887	32,496,394	2,490,755	14,555,027
Loyola Coll., Baltimore	Catholic	1852	Edward B. Bunn	24	165	165	165	...	3,833	63,000	3,850	2,037,815
Maryland, Univ. of, College Park	State	1807	H. C. Byrd	771	4,432	2,351	2,081	276	1,165	2,402,466	380,574	15,611,705
Morgan State Coll., Baltimore [N]	State	1837	D. O. W. Holmes	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Mount Saint Mary's Coll., Emmitsburg	Catholic	1838	John L. Sheridan	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Notre Dame of Maryland, Coll. of, Baltimore	Catholic	1803	Sister Mary Frances	55a	542	...	542	...	(u)	(u)	(u)	(u)
St. Joseph's Coll., Emmitsburg	Catholic	1809	Francis J. Dodd	30	196	...	196	30	16,900	47,407	14,081	1,856,004
State T. C., Salisbury	State	1925	J. Blackwell	18	200	18	105	...	77	...	...	...
State T. C., Towson	State	1866	M. Theresa Windfeld	35	236	5	231	...	209	...	...	821,448
U.S. Naval Academy, Annapolis	Federal	1845	V. Adams W. Hitch,	375	3,043	3,043	3,043	118	Federal	Federal	Federal	35,000,000
Washington Coll., Chestertown	Private	1782	Giles W. Mead	76	190	72	118	...	...	58,500	58,500	1,967,000
Western Maryland Coll., Westminster	Methodist	1807	Fred G. Holloway	45	476	88	388	4	127	900,000	65,000	1,967,000
American International Coll., Springfield	Private	1885	Chester Stowe McGown	28	1,305	495	810	97	37,449	76,258	6,478	227,833
Amherst Coll., Amherst	Private	1821	Stanley King	70	1,599	578	652	8	12,427,000	316,816	5,533,000	5,533,000
Boston Coll., Boston	Catholic	1863	William J. Keleher	160a	1,895	636	550b	303	...	864,000	226,997	2,000,000
Boston U. of the City of Boston	Municipal	1852	Wm. H. J. Kennedy	23	245	...	245	...	45,269	271,613	45,700	6,653,189
Clark Univ., Boston	Private	1839	Daniel L. Marsh	720a	12,899	3,767	9,132	1,827	7,300,000	5,480,303	271,613	2,000,000
Eastern Nazarene Coll., Wollaston	Private	1867	Wallace W. Atwood	38	458	74	135	184	...	45,700	45,700	380,000
Emmanuel Coll., Boston	Nazarene	1918	Samuel Young	59	418	146	272	13	2,200	156,079,410	1,498,819	4,848,860
Harvard Univ., Cambridge	Private	1636	Sister Teresa Patricia	71	725	2,028	168	1,439	308,165	430,000	38,600	17,208,647
Holy Cross Coll. of the Worcester	Catholic	1775	James Bryant Conant	1775	2,196	1,153	61	340	14,492	1,736,892	1,736,892	4,879,270
Massachusetts Inst. of Technology, Cambridge	Private	1861	William J. Healy	95	1,533	1,998	61	340	15,123	45,700	45,700	6,307,778
Massachusetts State Coll., Amherst	Private	1863	Karl Taylor Compton	530	2,059	1,998	61	340	15,123	45,700	45,700	6,307,778
Mount Holyoke Coll., South Hadley	State	1837	Ruehl P. Baker	140	830	129	600	33	147,730	6,036,000	192,503	3,911,433
Northeastern Univ., Boston	Private	1887	Roswell G. Ham	148	1,149	36	794	0	890	354,203	311,463	2,391,433
Our Lady of the Elms, Coll. of, Charropee	Catholic	1898	Carl Stephens Ell	179	4,091	3,297	794	0	123	...	...	...
1925 Thomas M. O'Leary	Catholic	1925	Thomas M. O'Leary	325	325	...	325	...	...	...	...	...

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty*	Enrollment, 1944-45				Student Aid 1944-45	Endowment ^d	Gifts and Grants 1944-45	Value of Plant
					Total	Men	Women	Graduate Students ^e				
Radcliffe Coll., Cambridge	Private	1879	Wilbur Kitchener Jordan	k	1,188	0	1,188	323	0	\$ 74,026	\$ 141,987	\$3,338,613
Regis Coll., Weston	Catholic	1927	Sister Honora	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Simmons Coll., Boston	Private	1899	Bancroft Beasley	95	1,565	2	1,563	166	208	24,676	88,901	2,453,695
Smith Coll., Northampton	Private	1871	Herbert Davis	251	1,565	2,003	1,563	81	497	162,025	145,232	9,445,822
Springfield Coll., Springfield	Y M C A	1885	Ernest M. Best	13a	774	169	605	81	163	1,085,385	22,066	1,706,427
State T. C., Fitchburg	State	1894	William J. Sanders	40	179	37	142	0	78	1,166	175,374	1,440,000
State T. C., Framingham	State	1839	Marvin F. O'Connor	35	446	0	446	0	0	500	79,955	1,000,000
State T. C., North Adams	State	1894	Grover C. Bowman	20	63	7	56	15	0	522	99,550	500,000
State T. C., Worcester	State	1871	Clinton E. Carpenter	32a	1,089	3	1,06	15	500	8,939,916	828,826	760,000
Tufts Coll., Medford	Private	1852	Leonard Carmichael	697a	2,387	1,766	621	49	68,889	12,411,784	928,826	4,460,075
Wellesley Coll., Wellesley	Private	1870	Mildred McA. Horton	200a	1,597	1,597	1,597	37	33,094	1,200,774	197,405	13,130,890
Wheaton College, Norton	Private	1834	A. Howard Menclay	68	475	475	475	0	33,094	12,760	2,774,705	1,440,000
Wheeler Coll., Boston	Private	1889	Winifred E. Bain	18	285	285	285	0	1,715	21,000	246,069	514,000
Williams Coll., Williamstown	Private	1793	James Phinney Baxter, III	83	811	811	811	4	21,962	11,735,494	6,063,631	6,063,631
Worcester Polytechnic Inst., Worcester	Private	1865	Wat T. Cluverus	61	434	434	434	4	12,360	4,875,701	2,743,931	2,743,931
Albion Coll., Albion	Methodist ¹	1835	William W. Whitehouse	52	594	144	450	2	73	2,543,145	21,071	2,076,603
Alma Coll., Alma	Presbyterian	1886	Roy W. Hamilton	24	489	341	148	2	3,915	139,268	26,159	570,717
Calvin Coll., Grand Rapids	Chr Ref Ch	1876	Henry Schultze	29a	420	125	295	155	155	195,000	225,000	585,000
Central Michigan Coll. of Ed., Mount Pleasant	State	1892	C. L. Anspach	118	4,427	1,337	2,510	76	504	1,755	2,327,352	2,327,352
Detroit Univ. of Detroit	Catholic	1877	Wm. J. Millor	182a	3,073	1,511	1,562	87	895	3,773	146,387	10,624,000
Emmanuel Missionary Coll., Berrien Springs	Adventist	1874	A. W. Johnson	38	502	214	288	219	4,852	425,975	38,393	1,105,245
Hillsdale Coll., Hillsdale	Private	1844	Harvey L. Turner	30	325	40	285	69	11,448	732,581	152,057	1,254,377
Hope Coll., Holland	Reformed	1866	Wynand W. Ichers	36	312	79	233	3b	12,873	1,215,078	54,599	1,254,377
Kalamazoo Coll., Kalamazoo	Baptist	1833	Paul Lamont Thompson	40	301	69	232	770	4,865	118,500	70,803	1,480,561
Marygrove Coll., Detroit	Catholic	1910	Sister M. Honora	73	770	770	770	789	175,269	16,910,294	31,960	4,000,000
Michigan Univ. of Ann Arbor	State	1817	Alexander Grant Ruthven	766	15,268	8,371	6,897	3,067	2,217	645,104	645,104	62,198,789
Michigan Coll. of Min. & Tech., Houghton	State	1885	Grover C. Dillman	85	737	681	56	5	304	1,902,143	719,516	2,579,534
Michigan St. Coll. of Agric. & Appl. Sci., East Lansing	State	1855	John Alfred Hannah	474	6,640	2,799	3,841	498	1,592	26,386	5,253,331	16,757,793
Michigan State Normal Coll., Ypsilanti	State	1849	J. M. Munson	158	1,815	1,771	1,644	40	609	68,970	790,143	6,280,271
Nazareth Coll., Nazareth	Catholic	1897	Sister M. Kevin	41	353	31	322	0	231	4,642	343,000	816,038
Northern Michigan Coll. of Education, Marquette	State	1899	Henry A. Tape	58	253	31	222	0	600	4,725	302,733	4,500,997
Siena Heights Coll., Adrian	Catholic	1919	Mother Mary Gerald	29	294	294	294	1,709	2,696	54,123	987,876	3,600,000
Wayne Univ., Detroit	Municipal	1868	David D. Henry	837a	15,286	5,651	9,635	142	644	4,725	987,876	3,600,000
Western Michigan Coll. of Educ., Kalamazoo	State	1903	Paul V. Sangren	225	2,747	767	1,838	142	644	4,725	987,876	3,600,000
Carleton Coll., Northfield	Private	1866	Donald J. Cowling	64a	766	82	684	4	70	3,575,415	233,279	4,154,602
Concordia Coll., Moorhead	Lutheran	1891	J. N. Brown	48	513	73	440	4	70	573,510	249,651	717,633
Gustavus Adolphus Coll., St. Peter	Lutheran	1862	Dr. Edgar M. Carlson	50a	639	435	204	495	495	560,436	48,700	937,154
Hamline Univ., St. Paul	Methodist	1854	Charles Nelson Pace	49	652	133	519	1	77	16,924	71,183	1,038,183
Macalester Coll., St. Paul	Presbyterian	1885	Chas. J. Turck	58	517	80	437	82	15,777	2,350,000	54,736	1,542,586
Minnesota Univ. of Minneapolis	State	1851	James L. Morrill	1,438	47,448	27,236	20,212	1,387	5,172	80,225	2,498,136	42,865,677
Saint Benedict Coll. of Saint Joseph	Catholic	1913	Mother Rosemond	36	213	213	213	1,115	195	15,661	96,356	522,102
St. Catherine Coll. of St. Paul	Catholic	1911	Sister Antonius	70	1,115	1,115	1,115	280	67,677	645,816	2,510,810	2,510,810
St. Mary's Coll., Winona	Catholic	1913	C. M. Granskou	30	443	443	443	27	6,459	1,012,022	104,823	2,294,687
St. Olaf Coll., Northfield	Lutheran	1874	Brother Joel Stanislaus	74	789	107	682	161	21,468	111,491	4,469	2,024,809
St. Scholastica Coll. of Duluth	Catholic	1912	Mother Athanasius	42	608	447	447	161	10,419	297,950	96,363	2,277,769
St. Teresa Coll. of Winona	Catholic	1885	Vincent J. Flynn	70a	907	292	907	16	198	176,500	794	1,560,000
State T. C., Bemidji	State	1919	A. C. Clark	37	234	47	187	198	222	5,393	794	1,560,000
State T. C., Duluth	State	1895	Herbert Sorenson	43	562	52	500	588	2,500	196,215	1,697,539	1,697,539
State T. C., Mankato	State	1868	Frank D. McElroy	51	1,011	920	920	208	208	1,125,000	3,725	1,125,000
State T. C., Moorhead	State	1887	Otto W. Snarr	44	408	28	390	764	5,771	166,650	15,000	1,320,040
State T. C., St. Cloud	State	1869	Dudley S. Brainerd	69	930	539	391	0	163	1,050	53,100	549,310
State T. C., Winona	State	1858	Nels Minne	37a	322	40	282	266	105	500,418	53,100	549,310
Alcorn A. & M. Coll., Alcorn	State	1871	P. S. Bowles	43	437	56	381	1,050	4,450	500,418	53,100	549,310
Blue Mountain Coll., Blue Mountain	Baptist	1873	Lawrence T. Lowrey	28	415	415	415	105	105	500,418	53,100	549,310



OLD GLORY RISES OVER IWO JIMA

Propelled upwards by six men of three Services, and recorded memorably by the plucky and lucky A.P. photographer, Joe Rosenthal. Pulitzer Prize Award, May, 1945. (Press Assoc., Inc.)



ONE COMPELLING CAUSE



FOR THIS EFFECT

Above: Vice Adm. Mark A. Mitscher looks at the enemy. Below: Excited Filipinos race over this Luzon beach to welcome the first liberating Coast Guardsman, January 9.



JAPAN SURRENDERS BENEATH THE MISSOURI'S BIG GUNS

Foreign Minister Mamoru Shigemitsu, accompanied by General Yoshijiro Umezaki, of the Japanese Imperial Staff, leads his delegation to the formal ceremony, September 3, 1945. (Official U. S. Navy)



GERMANY SURRENDERS UNCONDITIONALLY

In SHAEF's War Room, Reims, France, July 5, 1945, Col. Gen. Gustav Jodl, (center, back to camera) then Chief of Staff, signs the momentous formal document. On his left sits Gen. Admiral van Friedeburg, on right Maj. William Oxenius. Across table, left to right, Allied officers: Gen. Sir F. E. Morgan, Dep. Chief of Staff; Gen. Francois Savez, representing French Chief of Staff; Adm. Harold M. Burroughs, C-i-C Allied Naval Exp. Force; Lt. Gen. B. B. Smith, Chief of Staff to Gen. Eisenhower; Gen. of Artillery Ivan Susloparoff, Russia; Gen. Carl A. Spaatz, CG, USSTAF; Air Marshal J. M. Rabb; Maj. Gen. H. R. Bull; and Sen. Lt. Col. Ivan Zankovits. Interpreter. (U. S. Signal Corps)

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty*	Enrollment, 1944-45				Student Aid 1944-45*	Endowment*	Gifts and Grants 1944-45	Value of Plant
					Total	Men	Women	Graduate Students				
Delta State T. C., Cleveland, Miss.	State	1924	William Marion Kethley	32	316	37	279	174	\$ 5,500	\$ 86,587	\$ 125,683	\$ 1,400,000
Mississippi Coll., Jackson, Miss.	Methodist	1892	Marion L. Smith	28	1,481	74	1,407	247	7,575	881,435	11,766	930,075
University of Mississippi, Oxford, Miss.	State	1848	A. B. Butts	110	472	701	780	16	7,508	940,590	56,558*	4,753,483*
Mississippi Southern Coll., Hattiesburg, Miss.	Baptist	1826	Dolson McGinnis Nelson	33	290	136	154	37	6,000*	734,750*	...	1,813,608
Mississippi State Coll., State College, Miss.	State	1910	R. C. Cook	47	728	378	350	37	472	...	...	3,000,000
Mississippi State Coll. for Women, Columbus, Miss.	State	1878	Fred T. Mitchell	...	535	427	108	25	820	...	...	541,500
Tougaloo Coll., Tougaloo [N. Miss.]	Congregational	1869	Burney L. Parkinson	75	901	...	901	...	11,939	71,600	70,641	...
Central Coll., Fayette, Mo.	Methodist	1854	Harry S. DeVore	(u)	1,746	27	1,719	46	6,908	54,735	...	...
State T. C., Warrensburg, Mo.	State	1870	G. W. Diemer	78a	1,043	85	958	...	11,018	...	85	2,000,000 (u)
Culver-Stockton Coll., Canton, Mo.	Disc. of Christ	1853	Walker H. McDonald	(u)	488	144	344	...	998,105	...	31,040	687,029
Drury Coll., Springfield, Mo.	Private	1873	James F. Findlay	35	501	...	501	...	...	...	...	877,821
Fontbonne Coll., St. Louis, Mo.	Catholic	1917	Sister Mary B. O'Neill	47	468	102	366	102	10,744	463,323	...	2,600,000 (u)
Kennett Coll., St. Louis, Mo.	Municipal	1857	Charles H. Phillips	38	2,837	1,091	1,746	285	1,087	...	...	...
Kansas City T. C., Kansas City, Mo.	Private	1929	Clarence R. Decker	(u)	78	577	131	446	30,439	371,772	1,000	1,200,000 (u)
Lincoln Univ., Jefferson City [N. Mo.]	Municipal	1911	C. Bond	73	498	...	498	...	18,063	2,477,186	...	1,916,119
Lincoln Univ., St. Charles, Mo.	State	1896	Herbert A. Struggs	48	3,377	1,369	2,008	568	19,919	2,245,900	51,608	1,894,838
Missouri Coll., St. Charles, Mo.	Catholic	1872	M. St. George	30	745	317	428	...	1,149	581,141	5,535	921,997
Missouri Valley Coll., Marshall, Mo.	Presbyterian	1889	Robert L. Middlebush	42b	550	325	225	...	1,000	...	...	...
Northwest Missouri State T. C., Kirksville, Mo.	Presbyterian	1867	J. R. Cable	60	764	469	295	4	3,275	1,760,725	45,330	2,000,000 (u)
Park Coll., Parkville, Mo.	State	1906	Walter H. Ryke	41	222	215	7	...	4,200	...	72,807	1,926,766
Rockhurst Coll., Kansas City, Mo.	Catholic	1910	Wm. H. McCabe	28	2,322	294	2,028	625	3,457	8,883,047	1,965,374	2,000,000 (u)
St. Louis Univ., St. Louis, Mo.	Catholic	1818	Patrick J. Holloran	844	5,306	2,322	2,984	625	66,353	267,250	331,114	2,770,482
Southeast Missouri State T. C., Cape Girardeau, Mo.	State	1873	Walter Winfield Parker	67	1,274	516	758	...	5,000	659,200	34,200	465,400
Tarkio Coll., Tarkio, Mo.	State	1905	Roy Ellis	81	1,436	194	1,242	...	78,612	22,149,580	867,414	15,777,685
Washington Univ., St. Louis, Mo.	Presbyterian	1853	M. Earle Collins	23	200	35	165	...	4,765	589,624	28,931	614,427
Webster Coll., Webster Groves, Mo.	Private	1853	Arthur H. Compton	693	7,589	3,509	4,080	166	2,103	1,432,248	129,732	1,306,513
Westminster Coll., Fulton, Mo.	Catholic	1853	George F. Donovan	56	413	392	21	...	...	...	...	...
William Jewell Coll., Liberty, Mo.	Presbyterian	1853	Francis L. McCluer	23	392	...	392	...	...	...	...	...
Billings Polytechnic Inst., Montana	Baptist	1849	Walter Pope Binns	33	485	139	346	62	5,250	...	...	...
Carroll Coll., Helena, Mont.	Church	1908	Ernest T. Eaton	22	310	60	250	100	...	500,000	...	1,000,000
Great Falls Coll. of Educ., Great Falls, Mont.	Catholic	1910	Emmet J. Riley	19	437	321	116	...	...	...	...	100,000
Montana School of Mines, Butte, Mont.	Catholic	1932	J. J. Donovan	47	418	24	394	...	...	...	...	...
Montana State Coll., Bozeman, Mont.	State	1893	Francis A. Thomson	(u)	1,148	167	981	...	(u)	845,909	572,990	3,685,634
Montana State Normal Coll., Dillon, Mont.	State	1893	R. R. Renne	192	1,448	167	981	7	11,173	...	...	900,000
Montana State Univ., Missoula, Mont.	State	1893	Sheldon E. Davis	9	1,445	1	26	0	150	0	1,007	3,914,737
Creighton Univ., Omaha, Neb.	Catholic	1878	Thomas S. Bowdern	219	1,354	598	756	15	283	2,500,000	10,044	3,000,000
Doane Coll., Crete, Neb.	Congregational	1872	Bryant Drake Casey	43n	471	357	114	...	8,075	1,225,030	114,300	513,609
Duquesne Coll., Omaha, Neb.	Catholic	1881	Wm. Marshall French	38	590	171	419	...	...	...	40,840	486,500
Hastings Coll., Hastings, Neb.	Presbyterian	1882	Wm. Marshall French	38	590	171	419	...	...	...	26,723	14,976,600
Nebraska Wesleyan Univ., Lincoln, Neb.	State	1869	C. S. Boucher	397	5,865	2,305	3,560	675	24,214	5,214,113	46,145	629,018
Omaha Municipal Univ. of Omaha, Omaha, Neb.	Methodist	1887	Banjamin F. Schwartz	36a	441	80	361	125	7,014	944,483	10,000	1,184,688
State T. C., Chadron, Neb.	Municipal	1909	Rowland Haynes	82	3,026	119	2,907	88	16,948	190,000	...	2,500,000
State T. C., Kearney, Neb.	State	1911	Wiley G. Brooks	84	94	10	84	...	6,146	83,263	...	1,110,228
State T. C., Peru, Neb.	State	1905	Herbert L. Cushing	42	688	65	623	12	477	168,805	...	1,410,228
State T. C., Wayne, Neb.	State	1867	W. R. Pale	52	612	272	340	...	4,657	...	...	1,500,000
State T. C., Lincoln, Neb.	State	1910	J. T. Anderson	51	1,301	373	928	5	779	...	27,427	414,977
Union Coll., Lincoln, Neb.	Adventist	1891	E. E. Cossettine	38	732	350	382	...	750	...	...	...
Nevada, Univ. of Reno, Nev.	State	1874	John O. Moseley	72	588	190	398	37	6,766	747,855	246,490	3,410,627

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty	Enrollment, 1944-45				Student Aid 1944-45	Endowment	Gifts and Grants 1944-45	Value of Plant
					Total	Men	Women	Graduate Students				
New Hampshire												
Dartmouth Coll., Hanover.....	Private	1769	Ernest Martin Hopkins	255	1,797	1,797			\$ 18,000	\$22,208,454	\$ 529,336	\$10,588,464
Keano T. C. Keneo.....	State	1909	Lloyd P. Young	43	401	401	361	210			111,040	1,000,000
New Hampshire Univ. of Durham.....	State	1866	Harold W. Stoke	143	1,876	541	1,335	27	46,932	1,354,943	1,018,535	5,737,163
Plymouth T. C. Plymouth.....	State	1870	Ernest L. Silver	27	122	7	115				62,725	500,000
Rivier Coll., Nashua.....	Catholic	1833	Sister Marie Madelaine Getty	(u)	(u)	(u)	(u)	(u)	(u)		(u)	(u)
St. Anselm's Coll., Manchester.....	Catholic	1898	Bertrand Dolan	24	94	94			1,000			1,000,000
New Jersey												
Drew Univ., Madison.....	Methodist	1867	Arlo Ayres Brown	52	769	603	166	322		5,820,000	17,043	2,636,000
Georgian Court Coll., Lakewood.....	Catholic	1908	Mother Mary John	32	230	230						
Newark Univ. of Newark.....	Private	1933	George H. Black	344	836	344	492	185		114,005	56,000	324,710
Newark Coll. of Eng., Newark.....	State	1891	Allan R. Cullumore	70	974	788	43	44	6,917	93,949	209,756	1,118,716
Princeton Univ., Princeton.....	Private	1746	Harold Willis Dodds	358	2,500	2,500		132	114,564	39,137,467	4,344,051	
Rutgers Univ., New Brunswick (I).....	State	1766	Robert C. Clothier	353	6,425	3,882	2,543	391	211,709	5,789,000	212,421	20,575,150
Saint Elizabeth Coll. of Covent Station.....	Catholic	1899	Sister Marie Jose Byrne	83	1,016		1,016	427	23,200			3,100,000
St. Peter's Coll., Jersey City.....	Catholic	1872	Vincent Hart	25	299	107	190	2	1,600	30,000	6,123	800,000
State T. C. Glassboro.....	State	1923	Edgar F. Bunce	24	205	5	200	129	4,593		186,752	1,250,000
State T. C. Jersey City.....	State	1929	Chris C. Rosey	38	423	6	417	213	7,111		457,828	1,180,000
State T. C. Montclair.....	State	1908	H. A. Soragay	61	673	65	608	382	16,905		250,555	1,800,000
State T. C. Newark.....	State	1913	John B. Dougall	38	349	10	339	193	7,378		124,254	687,000
State T. C. Paterson.....	State	1855	C. S. Wrightman	37	308	18	290	108	5,110		447,559	2,000,000
State T. C. Trenton.....	State	1865	Roscoe L. West	32	676	32	676	80	31,167			2,729,000
Stevens Inst. of Technology, Hoboken.....	Private	1870	Harvey Nathaniel Davis	74	804	864		359	14,123	219,463	59,888	459,280
Ursula Coll., East Orange.....	Lutheran	1893	Evald B. Lawson	28	440	80	219	141	9,133			
New Mexico												
New Mexico Univ. of Albuquerque.....	State	1889	John Philip Wernette	142	2,478	1,102	1,376	105	4,747	949,100	1,000	2,839,941
New Mexico Coll. of A. & M. Arts, State College.....	State	1889	J. W. Branson	65	634	457	177	2	19,472	481,658	200	1,552,830
New Mexico Highlands Univ., Las Vegas.....	State	1893	Edward Eyring	35	783	52	202	15	8,222	52,166	2,980	1,079,040
State T. C., Silver City.....	State	1893	Haddon W. James	38	345	38	171	136	10,348	126,000		626,482
New York												
Adelphi Coll., Garden City.....	Private	1896	Paul Dawson Eddy	84	982		982		13,361	42,670	4,231	2,305,513
Baruch Coll., New York.....	Private	1889	Nicholas Murray Butler	115	1,237	1,237			55,859	5,084,338	34,979	2,301,287
Brooklyn Polytechnic Inst. of Brooklyn.....	Private	1854	Harry Stanley Rogers	179	2,646	2,498		941	696	1,992,006	16,068	1,992,006
Brooklyn Coll., Brooklyn.....	Municipal	1980	Harry D. Giddeon	412	13,906	4,067	9,839	403	2,254	1,513,480	2,297	7,569,540
Buffalo Univ. of Buffalo.....	Private	1848	Samuel P. Capen	406	4,641	1,899	2,742	201	1,554	6,763,319		7,105,123
Columbia Coll., Buffalo.....	Catholic	1840	Timothy J. Coughlin	49	1,197	448	749	89				1,140,549
City Coll. of the City of New York, New York.....	Municipal	1848	Harry Noble Wright	815	18,898	10,281	9,617	1,020	4,069		531,268	13,327,250
Columbia Coll. of Technology, Potsdam.....	Private	1896	John A. Rose, Jr.	32	386	386			4,186	1,274,897	20,300	771,484
Columbia Univ., Hamilton.....	Private	1819	Everett N. Case	86n	569	569			13,185	5,693,543	51,803	4,050,284
Cornell Univ., Ithaca.....	Private	1784	Nicholas Murray Butler	2,713	27,104	7,939	19,165	7,772	8,450	88,793,710	1,869,201	57,942,896
Cornell Univ., Ithaca.....	Private	1865	Edmund E. Day	1,127	8,891	5,210	3,681	6,25	1,070	283,337	2,811,230	30,547,177
D'Yerville Coll., Buffalo.....	Catholic	1908	Sister Grace	32	334		334	40				
Emory Coll., Elmira.....	Private	1855	William S. A. Pott	48	314	220	314		32,214	544,350	7,888	1,628,246
Fordham Univ., New York.....	Catholic	1864	Robert I. Gannon	233	4,494	2,220	2,274	604	33,670	776,180	89,100	2,560,000
Good Counsel Coll., White Plains.....	Catholic	1923	Mother M. Aloysia	42a	245		245		48,000		9,353	1,197,680
Hamilton Coll., Clinton.....	Private	1841	David Worcester	31a	203	203			8,683	3,934,342	32,202	2,384,678
Hobart Coll., Geneva.....	Episcopal	1822	John Milton Potter	46	498	498			701,220	105,604	105,604	1,173,085
Hofstra Coll., Hempstead.....	Private	1935	S. W. Paine	31a	453	173	280		4,813	722,889	1,554	937,018
Houghton Coll., Houghton.....	Methodist	1893	John Cranford Adams	36	470	139	331		16,000	277,526	17,983	559,171
Hunter College of the City of New York, N. Y.....	Municipal	1870	George N. Shuster	353	12,928	358	12,570	71	10,845	176,528	53,226	16,584,214
Keuka Coll., Keuka Park.....	Baptist	1890	Henry E. Allen	34	329		329		20,130	374,972	12,136	1,081,088
Manhattan Coll., New York.....	Catholic	1853	Brother B. Thomas	60	516	516			8,000	3,000,000	21,618	2,750,000
Manhattanville Coll. of the Sacred Heart, New York.....	Catholic	1847	Eleanor M. O'Byrne	73	482		482		65,000	400,000	40,818	3,385,106
Marion Coll., Tarrytown.....	Catholic	1907	Mother M. Gerard	(u)	(u)	(u)	(u)	(u)	(u)		(u)	(u)
Mount Saint Vincent Coll. of New York.....	Catholic	1910	Sister Catherine Marie	55	665		665		33,894	240,986	8,980	2,670,573
Nassau Coll. of Rochester, Rochester.....	Catholic	1924	Mother Rose Miriam	42	380		380		30,000			1,300,000
New Rochelle Coll. of New Rochelle.....	Catholic	1904	Francis W. Walsh	75	850		850		43,715	50,000	18,300	3,683,897

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1944-45				Student Aid 1944-45 ^b	Endowment ^c	Gifts and Grants 1944-45	Value of Plant
					Total	Men	Women	Graduate Students ^d	Sum-mer School ^e			
Wake Forest Coll., Wake Forest, N.C.	Baptist	1834	Thurman Kitchin	85	934	726	206	2	359	\$80,429	\$28,000	\$1,851,335
Western Carolina Coll., Cullowhee, N.C.	State	1889	H. T. Hunter	25	284	54	230		126	7,371	85,403	1,669,332
Winston-Salem Coll., Winston-Salem, N.C.	State	1892	Francis L. Atkins	42	626	54	572		290	14,634		1,113,530
Woman's Coll. of Univ. N. C., Greensboro	State	1892	Walter Clinton Jackson	219	2,001		2,200	8	837	520,842		7,695,390
North Dakota												
Jamestown Coll., Jamestown	Presbyterian	1883	Barend H. Kroeze	29	253	60	193		37	8,000	69,700	836,234
North Dakota Univ. of Grand Forks	State	1889	John C. West	135	1,864	984	880		336	1,700,000	2,000	3,300,000
North Dakota Agricultural Coll., Fargo	State	1893	Frank Lussenden Eversull	83	587	160	427	9	37	3,950	613,000	3,443,227
State Normal & Industrial School, Ellendale	State	1889	J. C. McMillan	24	194	85	109		125	2,000	515,000	517,245
State T. C., Mayville	State	1889	J. W. Headley	21	299	30	269		193	100	515,700	544,713
State T. C., Minot	State	1889	C. C. Swain	39	701	27	674		428			1,000,000
State T. C., Valley City	State	1889	Eugene H. Klempell	45	570	51	519		347	870,000		1,000,000
Ohio												
Akron, Univ. of Akron	Municipal	1870	Hezletton E. Simmons	114	3,304	1,187	2,117	68	412	3,453	304,392	1,461,157
Antioch Coll., Yellow Springs	Private	1853	Algo D. Henderson	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Ashland Coll., Ashland	Brethren	1878	Raymond W. Bixler	32	233	77	156		75	8,000	27,414	572,436
Baldwin-Wallace Coll., Berea	Methodist	1845	Louis C. Wright	68	1,026	583	443	7	521	17,793	106,047	2,080,945
Bowling Green State Univ., Bowling Green	State	1910	Frank J. Prout	96	1,763	519	1,244	15	407	25,000		3,750,000
Capital Univ., Columbus	Lutheran	1850	Otto Mees	76	661	234	427		248	634,412	13,244	1,231,500
Case School of Applied Science, Cleveland	Private	1880	William Elgin Wickenden	72	1,368	1,318	50	94	1,345	4,969	5,357,210	3,625,250
Cincinnati, Univ. of Cincinnati	Municipal	1819	Raymond Walters	604	8,440	3,420	5,020	316	1,450	77,119	120,062	2,406,651
Dayton, Univ. of Dayton	Catholic	1850	George J. Renneker	96	1,240	570	670	40	420	18,000	1,464,382	11,031,594
Denison Univ., Granville	Baptist	1831	Kenneth I. Brown	67a	1,070f	466	604		364	43,888	3,468,936	2,406,651
Fennell Coll., Cleveland	Private	1881	C. V. Thomas	129a	2,487	1,562	925		46	6,714	148,149	3,518,403
Findlay Coll., Findlay	Church of God	1882	Carroll A. Morey (e)	13	158f	65	93		32	13,357	33,433	530,358
Heidelberg Coll., Tiffin	Evangelical & Ref.	1850	Nevin C. Harner	27	273	44	233		32	983,242	53,480	805,558
Hiram Coll., Hiram	Private	1850	Paul H. Fall	22a	207	44	163		16	24,300	995,770	22,340
John Carroll Univ., Cleveland	Catholic	1886	Thomas J. Donnelly	41	1,078	558	520	20	46	2,500,000	1,272,000	4,685,000
Kent State Univ., Kent	State	1910	George A. Bowman	114	1,078	191	887	3	814	21,653	64,960	1,934,122
Kenyon Coll., Gambier	Episcopal	1824	Gordon Keith Chalmers	46a	1,078	177	177	6	95	21,396	20,406	1,315,501
Lake Erie Coll., Painesville	Private	1856	Helen Dalton Bragdon	28	158	60	137	3	57	7,900	22,114	1,138,383
Marietta Coll., Marietta	Private	1835	William A. Shimer	27	197	60	137		238	2,250		
Mary Mansel Coll., Toledo	Catholic	1873	Sister M. C. Raynor	39a	521	1,180	1,742	10	192	1,667,515		
Miami Univ., Oxford	State	1809	A. K. Morris (e)	201	2,922	1,180	1,742	10	192	1,667,515	50,653	6,829,659
Mt. St. Joseph-on-the-Ohio, Coll. Mt. St. Joseph	Private	1920	Mother Mary Zoe	39	342	142	396		173	16,641	13,225	3,080,810
Mount Union Coll., Alliance	Methodist	1846	Charles Burgess Ketcham	35	538	142	396		276	8,581	26,377	1,869,283
Muskingum Coll., New Concord	Presbyterian	1837	Robert N. Montgomery	64	661	106	389		39	23,412,620	221,886	6,033,040
Notre Dame Coll., South Euclid	Catholic	1922	Mother Mary Vera	32	221	221	221		39	2,036,957	515,872	29,433,787
Oberlin Coll., Oberlin	Private	1833	Ernest H. Wilkins	205	2,294	1,168	1,126	148	1,113	30,085	2,783,749	5,783,749
Ohio State Univ., Columbus	State	1873	Howard L. Bevis	1,304	14,544	6,704	7,840	1,365	4,559	98,205	263,235	2,922,113
Ohio Wesleyan Univ., Delaware	State	1804	John C. Baker	201	1,964	362	1,602	109	639	38,610	65,583	880,368
Ottawa Coll., Springfield	Methodist	1842	Herbert J. Burgstahler	107	1,450	622	808	20	583	3,610,660	9,920	1,449,349
St. Mary of the Springs Coll., Columbus	Un. Brethren	1911	J. Gordon Howard	40	466	145	321		266	1,209,708	65,583	200,000
Stetson Coll., Cleveland	Catholic	1847	Sister M. Anacleto	41	574		208		67			
Toledo, Univ. of Toledo	Catholic	1928	Edward F. Hoban	30	214	180	214	46	437	22,000	248,000	3,953,000
Ursuline Coll. for Women, Cleveland	Catholic	1872	Philip C. Nash	126	2,831	985	1,800	67	526			
Western Coll., Oxford	Catholic	1871	Mother Marie Sands	32	242		242					
Western Reserve Univ., Cleveland	Private	1853	Philip E. Henderson	43	362		362			15,675	787,862	1,224,245
Wilberforce Univ., Wilberforce	Private	1826	Winfred G. Leutner	773	10,873	3,363	7,510	954	3,122	74,331	268,346	11,122,967
Wilmington Coll., Wilmington	State	1856	Charles H. Wesley	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Wittenberg Coll., Springfield	Friends	1870	Sheppard Arthur Watson	21	395	92	303		165	5,194	16,000	447,743
Wooster Coll., Wooster	Lutheran	1845	Rees Edgar Tulloss	47	811	221	590	26	169	231,098	192,092	2,494,745
Xavier Univ., Cincinnati	Presbyterian	1866	Howard Foster Lowry	85	752	114	531		107	31,000	32,000	2,500,000
Xavier Univ., Cincinnati	Catholic	1831	Celestin J. Steiner	71a	1,086	545	541		118	266,270	28,316	1,640,709
Oklahoma												
Central State Coll., Edmond	State	1891	R. R. Robinson	64	1,212	211	929	12	576	9,000	210,807	1,406,347
East Central State Coll., Ada	State	1909	A. Linscheid	64	839	122	717		445	15,250		1,352,000
Northeastern State Coll., Tahlequah	State	1909	John S. Vaughan	48	681	130	521		483	11,100		895,970

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					Total	Men	Women	Graduate Students				
Northwestern State Coll., Alva	State	1897	Sabin C. Perrell	37	304	41	263		224	\$ 4,681,888	\$ 16,517	\$ 1,091,543
Oklahoma Univ. of Norman	State	1890	John L. C. Bennett	37	3,653	1,230	2,423		960	10,736,537	24,507	10,736,537
Oklahoma A. & M. Coll., Stillwater	State	1891	Henry Garland Bennett	38	2,739	930	1,809		940	3,332,155	34,607	8,221,773
Oklahoma Coll. for Women, Chickasha	State	1908	C. Dan Procter	63	773	350	423		730	766,500	20,800	1,639,000
Phillips Univ., Andover	Disc. of Christ.	1907	Eugene S. Briggs	44	844	264	580		267	.....	80,600	936,451
Southeastern State Coll., Durant	State	1909	T. T. Montgomery	45	1,294	414	879		750	.....	.....	.....
Southwestern Inst. of Technology, Weatherford	State	1901	R. H. Burton	60	1,478	189	285		461	1,366,935	228,455	1,599,529
Tulsa, Univ. of Tulsa	Presbyterian	1894	C. I. Puntius	60	1,438	384	495		256	.....	.....	.....
Eastern Oregon Coll. of Ed., La Grande	State	1929	Robert J. Maaske	26	410	60	350		194	104,652	1,528	569,556
Lewis and Clark Coll., Portland	Presbyterian	1867	Morgan S. Odell	31	157	43	114		33	300,000	17,000	377,000
Lanfield Coll., McMinnville	Baptist	1857	Harry L. Dulin	28	300	63	235		2	1,100,000	50,000	1,000,000
Maryhurst Coll., Maumet	Catholic	1880	Sister M. Rose Augusta	39	241	.....	241		134	80,000	.....	380,000
Mount Union Coll., St. Benedict	Catholic	1870	Thomas A. Neer	23	55	55	.....		25	90,000	.....	400,000
Oregon Coll. of Ed., Monmouth	State	1872	Charles A. Newburn	28	349	1,026	2,433		271	1,142,001	141,002	9,822,270
Oregon State Coll., Corvallis	State	1858	Charles A. H. Strand	237	3,485	1,567	1,918		514	14,468	69,725	9,520,017
Pacific Univ., Forest Grove	Congregational	1849	August Leroy Strand	24	189	31	158		597	1,930,350	17,737	9,520,017
Portland Univ., Portland	Catholic	1901	Charles C. Miltner	50	378	156	222		81	339,323	40,638	517,242
Reed Coll., Portland	Private	1911	Arthur F. Scott (e)	21	161	20	141		162	.....	75,000	549,000
Southern Oregon Coll. of Ed., Ashland	State	1926	Walter Redford	50	760	298	453		351	1,750,000	.....	300,000
Williamette Univ., Salem	Methodist	1842	C. Herbert Smith	50	760	298	453		351	.....	.....	965,000
Albright Coll., Reading	Evangelical	1856	Harry V. Masters	51	708	177	531		210	1,638,410	17,406	2,424,515
Allegheny Coll., Meadville	Private	1815	John Ritchie Schultz	51	632	177	531		210	7,391,483	137,470	6,178,885
Bryn Mawr Coll., Bryn Mawr	Private	1860	Katharine E. McBride	94	1,116	496	618		91	1,338,204	109,532	3,523,934
Carnegie Inst. of Technology, Pittsburgh	Baptist	1906	Robert L. Spencer	101	1,116	496	618		91	18,084,028	310,023	8,198,649
Cedar Crest Coll., Allentown	Evangelical	1867	Dale H. Doherty	32	630	714	900		45	123,785	13,027	1,193,563
Chestnut Hill Coll., Philadelphia	Catholic	1871	Sister Maria Kostka	48	630	.....	630		232	300,000	3,500	1,175,000
Cheyney Train School for Teachers	State	1837	L. P. Hill	17	143	7	135		205	1,100,000	12,482	1,205,000
Col., Masonic, Dallas	Catholic	1923	Sister Mary Borromeo	43	225	229	.....		78	1,718,355	83,263	1,796,620
Dickinson Coll., Carlisle	Methodist	1773	C. William Prettyman	38	336	147	189		78	2,953,217	10,131	4,505,600
Drexel Inst. of Technology, Philadelphia	Private	1891	James Cresce	100	1,489	685	804		454	2,000,000	44,860	1,894,829
Duquesne Univ., Pittsburgh	Catholic	1878	R. V. Kirk	148	1,458	390	1,068		61	1,501,650	26,094	2,411,050
Franklin and Marshall Coll., Lancaster	Evangelical	1787	Theodore A. Distler	35	797	797	.....		9,507	666,453	42,446	1,132,699
Geneva Coll., Beaver Falls	Ref. Presb.	1848	M. M. Pearce	25	576	152	424		211	749,800	25,000	2,000,000
Gettysburg Coll., Gettysburg	Lutheran	1832	Henry W. A. Hanson	42	581	340	241		137	842,281	.....	3,188,678
Grove City Coll., Grove City	Presbyterian	1876	Wen C. Keller	45	567	93	474		165	.....	.....	.....
Hammond Coll., Hammond	Friends	1863	Felix Morley	40	316	.....	316		137	3,256,982	2,457	4,247,185
Indiana Coll., Vincennes	Catholic	1876	Francis W. Finley	32	320	96	223		137	750,262	55,271	1,098,354
Junia Coll., Huntington	Presbyterian	1876	Ralph Cooper Hutchinson	32	320	294	26		156	4,300,343	73,000	2,047,767
Lafayette Coll., Easton	Baptist	1826	Clyde G. Paul	39	330	160	170		170	804,256	35,308	732,863
La Salle Coll., Philadelphia	Catholic	1863	Bryce G. Paul	25	160	160	.....		170	28,712	26,274	7,181,051
Lebanon Valley Coll., Annville	Un. Brethren	1866	E. K. Smiley	94	728	640	88		48	8,000,000	120,330	7,877,527
Lehigh Univ., Bethlehem	Private	1865	Walter Livingston Wright	22	155	155	.....		437	1,019,005	.....	3,030,500
Lincoln Univ., Lincoln University [N.]	Presbyterian	1854	Sister M. Sylvia	56	466	.....	466		95	1,500,000	.....	1,603,500
Marywood Coll., Scranton	Catholic	1915	Mother M. Borga	32	232	.....	232		95	500,000	.....	700,000
Mercyhurst Coll., Erie	Catholic	1926	Mother M. Haupt	34	397	.....	397		462	.....	.....	.....
Moravian Univ., Bethlehem	Moravian	1807	Raymond M. I. Dougherty	34	397	.....	397		462	.....	.....	.....
Mount Mercy Coll., Pottsville	Catholic	1929	Mother M. I. Dougherty	34	397	.....	397		462	.....	.....	.....
Mount St. Joseph Univ., Philadelphia	Lutheran	1848	Levering Tyson	49	407	.....	407		462	.....	.....	.....
Mount St. Joseph Univ., Pottsville	Private	1869	Paul R. Anderson	49	407	.....	407		462	.....	.....	.....
Pennsylvania Coll., Pottsville	Private	1869	Paul R. Anderson	49	407	.....	407		462	.....	.....	.....
Pennsylvania State Coll., State College	State	1855	Ralph D. H. Hessel	1,234	10,802	1,174	2,668		1,222	3,517,000	11,579	1,895,083
Pittsburgh Univ. of Pittsburgh	Catholic	1875	John G. Brown	1,234	10,802	4,106	6,696		1,222	3,517,000	40,951	22,266,276
Rosemont Coll., Rosemont	Catholic	1922	John G. Brown	1,234	10,802	4,106	6,696		1,222	3,517,000	40,951	22,266,276
St. Francis Coll., Loretto	Catholic	1847	John F. J. Sullivan	23	155	155	.....		68	500,000	28,900	1,112,500

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1944-45					Student Aid 1944-45 ^c	Endowment ^d	Gifts and Grants 1944-45		Value of Plant		
					Total	Men	Women	Graduate Students ^b	Summer School ^b			\$	(u)		\$	(u)
St. Joseph's Coll., Philadelphia	Catholic	1851	John J. Long	(u)	(u)	(u)	(u)	(u)	\$	(u)	\$	(u)	\$	(u)	\$	
St. Vincent Coll., Latrobe	Catholic	1846	Alfred Koch	44a	350	350	..	104	81	87,000	1,500,000	..	..	..	2,000,000
Seranton Univ. of, Scranton	Catholic	1888	William Coleman Nevils	43	403	403	..	..	87	12,600	500,000	16,000	..	..	2,745,000
Seton Hill Coll., Greensburg	Catholic	1882	James A. W. Reeves	58	713	713	..	..	249	8,584	..	..	..	..	2,000,000
State T. C., Bloomsburg	State	1839	Harvey A. Andrus	39	950	497	453	..	299	3,680	..	..	..	..	1,700,000
State T. C., California	State	1852	Robert M. Steele	28	308	79	229	..	387	1,045	..	..	..	..	1,308,480
State T. C., Clarion	State	1867	Paul G. Chandler	21	219	36	183	..	145	1,045	..	..	..	..	1,361,880
State T. C., East Stroudsburg	State	1893	Joseph F. Noonan	37	524	104	430	..	260	..	..	..	..	..	1,500,000
State T. C., Edinboro	State	1857	L. H. Van Houten	23	516	29	487	..	192	..	..	..	..	..	2,120,844
State T. C., Indiana	State	1875	J. M. Uhler	81	733f	49	684	..	419	..	..	..	..	..	2,120,844
State T. C., Kutztown	State	1866	Quincy A. W. Rohrbach	29	262	71	231	..	330	..	..	..	..	..	2,860,470
State T. C., Lock Haven	State	1878	Richard T. Parsons	28	479	38	401	..	216	..	..	..	..	..	2,860,470
State T. C., Mansfield	State	1859	James G. Morgan	42	198	16	182	..	90	..	..	..	..	..	2,860,470
State T. C., Millersville	State	1855	D. L. Biemesderfer	39	478	123	355	..	282	8,077	..	..	..	..	2,860,470
State T. C., Shippensburg	State	1871	Albert Lindsey Rowland	28	192	21	171	..	143	8,220	..	..	..	..	2,860,470
State T. C., Slippery Rock	State	1889	John A. Entz	44	207	21	186	..	163	2,215	..	..	..	..	2,860,470
State T. C., West Chester	State	1871	Charles S. Swope	60	884	77	727	..	905	9,633	..	..	..	..	2,860,470
Susquehanna Univ., Selingsgrove	Un. Lutheran	1853	G. Morris Smith	27	239	49	186	..	78	16,033	461,297	28,502	..	..	876,042
Swarthmore Coll., Swarthmore	Friends	1864	John W. Nason	88	812	431	381	2	297	45,643	8,364,310	49,058	..	..	4,246,827
Temple Univ., Philadelphia	Private	1864	Robert L. Johnson	553a	7,816	3,815	4,001	1,073	495	146,518	821,272	417,034	..	..	6,953,316
Thiel Coll., Greenville	Lutheran	1896	Wm. F. Zimmerman	16	278	82	196	..	119	5,000	170,000	55,000	..	..	750,000
Uranus Coll., Collegeville	Evang. & Ref.	1869	N. E. McClure	35	564	261	303	..	201	30,000	700,000	35,000	..	..	1,500,000
Villa Maria Coll., Erie	Catholic	1882	Sister Doloretta	33	284	..	284	4	142	2,000	360,642	..	..	..	1,134,561
Villanova Coll., Villanova	Catholic	1842	F. X. N. McGuire	154	1,258	611	1,258	91	1,036	12,942	8,050,410	131,246	..	..	5,300,000
Washington and Jefferson Coll., Washington	Presbyterian	1780	Clarence J. Pietsenpol (e)	23	125	124	..	462	96	20,567	1,812,242	..	..	..	2,108,443
Westminster Coll., New Wilmington	United Presb.	1852	Robert F. Galbreath	53	569f	107	462	..	119	30,500	773,600	..	..	..	1,665,000
Wilson Coll., Chambersburg	Presbyterian	1869	Paul Swain Havens	57	430	..	430	..	31,295	985,097	..	3,131	..	..	1,224,015
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Polytech. Inst. of Puerto Rico	Presbyterian	1912	Jarvis S. Morris	25	305	154	151	..	429	4,000	400,000	45,000	..	..	800,000
Rhode Island	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brown Univ., Providence (r)	Private	1764	Henry Merritt Wriston	270	2,159	1,268	711	180	0	77,086	11,675,339	361,419	..	..	8,093,758
Pembroke Coll., Providence (v)	Private	1891	Henry Merritt Wriston	1891	..	..	..	..	..	43,000	581,951	40,473	..	..	2,500,000
Providence Coll., Providence	Catholic	1919	Frederick C. Foley	68	176	176	..	..	160	14,000	90,000	300,000	..	..	1,670,201
Rhode Island Coll. of Ed., Providence	State	1854	Lucius A. Whipple	56	284	4	280	..	138	..	..	..	..	..	..
Rhode Island State Coll., Kingston	State	1882	Carl R. Woodward	156	642	199	443	12	..	10,090	..	875,100	..	..	5,235,704
South Carolina	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Beaumont Coll., Columbia [N.]	Baptist	1870	J. A. Beacote	30	1,022	116	906	..	729	10,000	8,401	19,428	..	..	701,572
Charleston Coll. of Charleston	Municipal	1770	George D. Grice	..	221	80	141	..	122	6,000	626,000	2,000	..	..	1,480,802
The Citadel, The Military Coll. of S. C., Charleston	State	1842	Gen. C. P. Summerall	36	483	483	..	..	440	7,336	101,000	..	..	..	5,000,000
Clemson Agric. Coll. of S. C., Clemson	State	1889	Robert Franklin Poole	111	876	829	47s	..	..	1,891	276,983	56,973	..	..	6,594,480
Coker Coll., Hartsville	Private	1854	Donald C. Agnew	33	458	7	451	..	89	3,600	675,000	12,200	..	..	659,400
Columbia Coll., Columbia	Methodist	1854	J. Caldwell Guilds	33	401	..	..	..	..	537,653	..	..	..	..	589,880
Converse Coll., Spartanburg	Private	1889	E. M. Gwathmey	42a	546	2	421	1	123	15,799	699,005	105,938	..	..	1,180,131
Duke Univ., Durham	Presbyterian	1839	Robert Calvin Grier	31	283	48	235	5	117	6,800	381,000	40,800	..	..	6,120,240
Furman Univ., Greenville	Baptist	1826	John Laney Pyle	48	1,166	302	864	16	369	15,420	2,799,098	201,324	..	..	2,262,488
Green College, Gainesville	Private	1845	Robert Colley Granberry	38	327	327	..	..	101	7,960	573,810	2,811	..	..	810,409
Hamotone Coll., Gaffney	Private	1856	James C. Kinard	33	185	90	95	..	121	1,250	330,000	20,000	..	..	485,000
Newberry Coll., Newberry	Lutheran	1866	Admiral N. M. Smith	154	2,219	1,331	888	56	402	4,449	..	..	..	..	6,639,000
South Carolina State A. & M. Coll., Orangeburg	State	1891	Henry R. Sims	95	979	297	682	..	1,383	11,961	..	199,643	..	..	1,500
South Carolina State S. C. Coll. for Women, Rock Hill	State	1886	Henry R. Sims	101	1,984	18	1,966	..	826	15,956	..	213,000	..	..	3,825,000
Winthrop Coll., Spartanburg	Methodist	1851	Walter Kirkland Greene	13	231	99	..	45	87	5,800	846,217	22,000	..	..	744,675
South Dakota	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Augustana Coll., Sioux Falls	Lutheran	1860	Lawrence M. Stavag	27	492	79	413	..	124	10,584	465,717	30,000	..	..	421,269
Black Hills T. C., Spearfish	.. State	1883	Russell E. Jones	30	120	..	..	..	375	..	..	75,916	..	..	550,000

Institution and Address	Control or Affiliation	Date Founded	Chf. Executive	Faculty*	Enrollment, 1944-45				Student Aid 1944-45*	Endowment*	Gifts and Grants 1944-45	Value of Plant
					Total	Men	Women	Graduate Students ^b				
West Texas State T. C. Canyon.....	State	1910	J. A. Hill	72	914f	240	674	135b	\$ 426	\$ 9,200	\$ 21,000	\$ 2,180,000
Wiley Coll., Marshall.....	Methodist.....	1873	E. C. McLeod.....	(u)	453	103	350	..	183	..	26,000	550,000
Utah												
Brigham Young Univ., Provo.....	L D S	1875	Howard S. McDonald ..	136	1,508	354	1,154	97	549	6,135	404,491	2,405,539
Saint Mary-of-the-Wasatch Coll. of Salt Lake City.....	Catholic ..	1926	Sister Mary Agnes ..	17	99	99	..	..	78	12,602	114,724	750,000
Utah, Univ. of, Salt Lake City.....	State	1850	LeRoy E. Cowles	280	3,693	1,251	2,442	80	1,638	25,000	1,406,950	4,000,000
Utah State Agricultural Coll.	State	1888	Elmer G. Peterson	139	1,771w	680	1,091	35	380	..	22,738	3,688,964
Vermont												
Bennington Coll., Bennington	Private	1832	Lewis Webster Jones ..	43a	300	..	300	..	..	58,833	21,460	1,419,789
Middlebury Coll., Middlebury	Private	1800	Samuel S. Stratton	120a	1,489	152	552	8	788	4,791,835	209,224	2,745,481
Norwich Univ., Northfield	Private	1819	Homer L. Dodge	35	456	330	126	..	1,345	979,370	95,281	1,481,378
St. Michael's Coll., Winoski Park ..	Catholic ..	1904	James H. Petty	25	72	66	6	62	170	5,816	12,000	553,000
Vermont, Univ. of, & State Agric. Coll., Burlington. State	State	1791	John S. Mills	169a	1,256	248	634	6b	368b	100,995	2,194,244	3,584,213
Virginia												
Bridgewater Coll., Bridgewater	Brethren ..	1880	Paul Haynes Bowman ..	26	190	66	124	..	70	10,643	528,471	530,658
Emory and Henry Coll., Emory	Methodist ..	1836	Foye G. Gibson	19	391	320	71	..	339	8,409	560,547	560,000
Hampton Inst., Hampton [N]	Private	1868	Ralph P. Bridgman	99a	1,506	386	1,120	264	413	84,653	10,011,622	3,993,991
Hampton-Sydney Coll., Hampton-Sydney ..	Presbyterian ..	1776	Edgar G. Gammon	18	98	98	..	..	..	2,000	388,885	817,285
Hollins Coll., Hollins College	Private	1842	Bessie C. Randolph	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Lynchburg Coll., Lynchburg	Disc. of Christ ..	1903	R. B. Montgomery	21	206	82	124	..	50	8,418	104,088	585,500
Madison Coll., Harrisonburg	State	1908	Samuel P. Duke	88	1,531	47	1,484	535	25,021	65,739	180	2,200,000
Mary Baldwin Coll., Staunton	Presbyterian ..	1842	L. Wilson Jarman	33	318	..	318	..	6,935	588,994	9,299	905,469
May Washington Coll. of the Univ. of Virginia ..	State	1908	Morgan L. Combs	107	2,101	..	2,101	..	562	14,000	..	3,500,000
Radford Coll., Radford	State	1910	David W. Peters	51	1,112	..	1,112	..	652	7,297	..	1,350,625
Randolph-Mason Coll., Ashland	Methodist ..	1830	J. Earl Moreland	19	99	80	19	..	35	1,787	992,931	588,570
Randolph-Mason Woman's Coll., Lynchburg ..	Methodist ..	1893	Theodore W. Jack	78	694	694	..	..	43,207	1,260,000	323,712	2,199,000
Roanoke Coll., Salem	Baptist	1832	Frederic W. Boatwright ..	91a	1,921	1,288	633	19	266	29,775	2,829,196	3,150,000
State T. C., Farmville	Lutheran ..	1842	Chas. J. Smith	24	315	117	198	..	134	3,775	675,000	800,000
Sweet Briar Coll., Sweet Briar	State	1884	J. L. Jarman	59	1,222	5	1,217	..	347	12,778	197,508	1,712,000
Virginia, Univ. of, Charlottesville	Private	1901	Meta Glass	54	456	..	456	..	20,643	793,307	33,735	1,689,171
Virginia Military Inst., Lexington	State	1819	John Lloyd Newcomb ..	177	1,250	1,136	114	96	135	12,349,788	413,617	3,085,448
Virginia Polytechnic Inst., Blacksburg ..	State	1872	Chas. E. Kilbourne	53	595	..	595	..	(u)	(u)	(u)	(u)
Virginia State Coll. for Negroes, Ettrick ..	State	1882	Julian A. Burruss	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Virginia Union Univ., Richmond [N] ..	Baptist	1865	Luther H. Foster	92	1,089	227	862	31	550	33,959	288,638	2,429,883
Washington and Lee Univ., Lexington ..	Private	1749	John Malcus Ellison	35	1,038	169	527	12	330	786,475	116,781	1,160,862
West Hampton Coll., Richmond w ..	Baptist	1913	Francis P. Gaines	39	138	138	..	..	27,611	3,248,900	37,250	3,907,601
William and Mary, Coll. of, Williamsburg	State	1614	May L. Keller	48	308	308	..	..	52,388	1,674,522	47,921	7,500,000
Washington												
Central Washington Coll. of Ed., Ellensburg ..	State	1881	Robert E. McConnell	56	558	44	494	..	381	1,576	..	1,668,697
Eastern Washington Coll. of Ed., Cheney ..	State	1880	Walter W. Isle	78	482	78	414	..	252	..	..	(u)
Holy Names Coll., Spokane	Catholic ..	1887	Francis E. Coker	88	829	522	307	61	87	..	..	1,235,000
Pacific Lutheran Coll., Portland	Lutheran ..	1907	Sister M. Elizabeth Clare ..	20	150	150	..	..	91	..	..	211,915
Puget Sound Coll. of Tacoma	Methodist ..	1884	S. C. Eastvold	26a	287	53	234	..	92	1,960	55,770	566,112
St. Edward's Coll., Mary, Kenmore ..	Catholic ..	1888	R. Franklin Thompson ..	811	811	251	560	11	178	4,425	76,707	1,228,000
St. Martin's Coll., Lacey	Catholic ..	1930	John P. McCormick	17	168	168	..	..	..	..	..	450,000
Seattle Coll., Seattle	Catholic ..	1895	Raphael A. Heider	22n	72	26	36x	(u)	2,000	40,000	1,500	750,000
Seattle Pacific Coll., Seattle	Catholic ..	1892	Francis J. Corkery	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Walla Walla Coll., Coliers Place	Free Methodist ..	1891	C. Hoyt Watson	28a	465	120	345	188	16,791	100,000	27,231	443,827
Washington State Coll. of Pullman	Adventist ..	1892	George W. Bowers	44	712	287	425	..	147	..	..	6,727,776
Washington, Univ. of, Seattle	State	1869	Wilson Compton	194	1,978	483	1,495	126	639	7,233,541	40,602	6,727,776
Western Washington Coll. of Ed., Bellingham ..	State	1861	Lee Paul Sieg	690	8,477	2,162	6,315	547	2,791	150,000	191,092	20,000,000
Western Washington Coll. of Ed., Bellingham ..	State	1893	W. W. Haggard	56	731	95	636	..	391	..	..	319,315

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty*	Enrollment, 1944-45				Student Aid, 1944-45*	Endowment†	Gifts and Grants, 1944-45	Value of Plant
					Total	Men	Women	Graduate Students				
Whitman Coll., Walla Walla.	Private	1859	Winslow S. Anderson	42	688	331	357	12	\$ 6,500	\$1,250,000	\$ 111,868	\$ 600,257
Whitworth Coll., Spokane.	Presbyterian.	1890	Frank F. Warren	27	475	92	383	95	16,000	15,952	72,971	423,000
West Virginia												
Bethany College, Bethany	Disc. of Christ.	1840	Wilbur H. Cramblet	45	630	369	261	....	23,475	2,988,608	15,181	1,254,548
Concord Coll., Athens	State	1872	Virgil H. Stewart	38	973	442	530	....	711	....	....	1,350,000
Fairmont State College, Fairmont	State	1867	George H. Hand	35	773	164	609	....	4,422	....	181,500	1,400,000
Glenville State Coll., Glenville	State	1873	D. L. Haught	19	636	184	452	....	427	....	....	800,000
Marshall Coll., Huntington	State	1837	John Davis Williams	108	2,027	462	1,625	94	9,385	375,800	....	4,250,000
Shepherd Coll., Shepherdstown	State	1871	W. H. S. White	18	347	72	268	....	1,330	....	....	400,000
West Liberty State Coll., West Liberty	State	1837	Paul N. Elhun	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
West Virginia State Coll., Institute [N.]	State	1891	John W. Davis	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
West Virginia Univ., Morgantown.	State	1867	C. T. Neff, Jr.	240	2,036	794	1,242	328	7,273	2,574,797	36,660	12,000,000
West Virginia Wesleyan Coll., Buckhannon	Methodist	1890	Arthur A. Schoolcraft (c)	27	638	154	484	....	135	337,181	41,766	537,958
Wisconsin												
Alverno T. C., Milwaukee.	Catholic	1890	Mother M. Corona	65a	1,124	486	638	....	22,368	2,241,181	56,411	1,420,816
Beloit Coll., Beloit	Private	1846	Carey Cronis	45	369	48	321	....	7,980	1,951,910	52,018	1,053,388
Carroll Coll., Waukesha	Presbyterian.	1846	G. T. Vander Lugt	32	267	58	209	....	7,900	1,424,000	227,500	2,375,000
Lawrence Coll., Appleton	Private	1847	Nathan M. Pusey	60	662	245	408	....	10,776	2,346,603	12,141	1,711,072
Marquette Univ., Milwaukee	Catholic	1864	Peter A. Brooks	(u)	(u)	(u)	(u)	(u)	23,902	883,855	49,490	755,018
Milwaukee-Dowder Coll., Milwaukee	Private	1851	Lucia R. Briggs	47a	441	....	441	....	324	....	....	445,000
Mount Mary Coll., Milwaukee	Catholic	1851	Edward A. Fitzpatrick	89a	886f	252	166	....	3,253	....	214,000	1,050,000
Ripon Coll., Ripon	Private	1851	Clark G. Kuebler	35	418	690	300	....	522	....	195,756	1,522,780
St. Norbert Coll., West De Pere	Catholic	1898	B. R. Penning	39a	690	390	300	....	592	....	161,194	873,850
State T. C., Eau Claire	State	1916	W. R. Davies	7	367	81	286	....	326	....	....	950,000
State T. C., La Crosse	State	1909	Reford S. Mitchell	51	453	86	367	....	324	....	....	1,000,000
State T. C., Milwaukee	State	1890	Frank E. Baker	89	1,440	146	847	....	2,628	....	....	1,975,000
State T. C., Oshkosh	State	1871	Forrest R. Polk	52	277	38	239	....	500	....	1,204,877	2,720,481
State T. C., Waterville	State	1866	Chester O. Newlun	35	910	141	769	....	682	2,885	2,711,272	2,720,481
State T. C., River Falls	State	1874	J. H. Ames	40	300	116	184	....	....	....	....	....
State T. C., Stevens Point	State	1894	Wm. C. Hansen	48	677	132	545	....	....	....	....	....
State T. C., Superior	State	1893	Jim Dan Hill	49	226	32	194	....	....	....	....	....
State T. C., Wausau	State	1866	C. M. Yoder	45	720	87	633	....	....	....	....	....
Stout Inst., Menomonie	State	1893	Verne C. Fryklund	46	316	67	249	....	....	....	....	....
Wisconsin, Univ. of Madison	State	1848	Edwin B. Fred	613	8,278	2,011	4,700	....	....	....	....	....
Wyoming												
Wyoming, Univ. of Laramie	State	1887	J. L. Morrill	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)

† Formerly Louisiana State Normal College.

a Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.

b Included in total.

c Excludes NYA. Includes value of scholarships, etc.

d Includes appropriations.

e Acting.

f Does not include summer school enrollment.

g Atlanta University is affiliated with Morehouse and Spelman Colleges in a university plan.

h Only Christian Scientists are allowed to enroll

i Statistics include Marycrest College for Women.

j Katherine Blunt President after July 1, 1945.

k The Harvard faculty of Arts and Sciences is the Radcliffe faculty.

l Includes New Jersey College for Women.

m Alfred University is a private corporation, but is affiliated with the New York State College of Ceramics

n Contributed services equivalent to interest on \$500,000 endowment.

p Includes Hobart College (for men) and William Smith College (for women), coordinate institutions

q All data applying to College of Letters and Science.

r Includes Pembroke College for Women.

s Women are admitted only in summer session.

t Does not include graduate and summer students.

u No statistics were supplied by this institution for 1944-45.

v Coordinate institution of Brown University.

w Coordinate institution of Univ. of Richmond.

x Students of Nursing Education.

y Is included in the year of 3 terms of 16 weeks each.

TABLE 5—ESTIMATED FALL CIVILIAN ENROLLMENT OF STUDENTS ENTERING COLLEGE FIRST TIME, BY TYPE OF INSTITUTION, BY YEAR, AND BY SEX
(In thousands)

Type of Institution	Fall of 1941			Fall of 1943			Fall of 1945		
	All	Men	Women	All	Men	Women	All	Men	Women
All institutions.....	395.7	226.8	168.9	255.2	167.8	87.4	290.5	121.1	169.4
Universities, colleges and professional schools.....	277.3	171.1	106.2	176.4	67.6	108.8	205.4	95.7	109.7
Publicly-controlled universities, colleges and professional schools.....	125.0	74.8	50.2	86.4	31.9	54.5	96.3	45.9	50.4
Privately-controlled universities and colleges.....	136.8	84.4	52.4	79.4	29.0	49.8	95.9	41.4	54.5
Privately-controlled professional and technical schools.....	15.5	11.9	8.6	10.6	6.1	4.5	13.2	8.4	4.8
Teachers colleges (publicly and privately controlled).....	34.4	14.1	20.3	20.0	3.5	16.5	23.6	6.1	17.5
Junior colleges (and normal schools).....	69.4	35.8	33.6	45.3	13.3	32.0	44.0	14.3	29.7
Publicly controlled.....	52.0	29.4	22.6	30.5	10.0	20.5	29.1	10.7	18.4
Privately controlled.....	17.4	6.4	11.0	14.8	3.3	11.5	14.9	3.6	11.3
Negro institutions.....	14.6	5.8	8.8	13.5	3.0	10.5	17.5	5.0	12.5

TABLE 6—ESTIMATED FALL CIVILIAN ENROLLMENT OF STUDENTS ENTERING COLLEGE FIRST TIME, NUMBER AND PERCENT OF TOTAL, BY YEAR, AND BY SEX, 1941-1945
(Numbers in thousands)

Year	Number Enrolled	Total		Number Enrolled	Men		Number Enrolled	Women	
		Enrolled for first time	Percent		Enrolled for first time	Percent		Enrolled for first time	Percent
1941.....	1,263	396	31	765	227	30	498	169	34
1943.....	738	255	35	274	87	32	404	168	36
1945.....	926	291	31	360	121	34	566	170	30

TABLE 7—ESTIMATED INCREASE AND DECREASE IN FALL CIVILIAN ENROLLMENT, MEN AND WOMEN STUDENTS, 1941-1945
(Amounts in thousands)

Item	Fall 1941 to Fall 1943		Fall 1943 to Fall 1945		Fall 1941 to Fall 1945	
	Amount	Percent	Amount	Percent	Amount	Percent
All students.....	-525	-42	+188	+25	-337	-27
Entering college first time.....	-140	-35	+35	+14	-105	-27
In college before.....	-385	-44	+153	+32	-232	-27
Men.....	-491	-64	+86	+31	-405	-53
Entering college first time.....	-139	-61	+34	+39	-105	-46
In college before.....	-352	-65	+52	+28	-300	-56
Women.....	-34	-07	+102	+22	+68	+14
Entering college first time.....	-1	-01	+1	+01	0	0
In college before.....	-33	-10	+101	+34	+68	+21

* Increase of less than 500 and less than one percent.

in the number of veterans in education or in training status under the provisions of Public Law 346. As of Sept. 30, 1945, there were 22,301 veterans in institutions of higher education under provisions of the Servicemen's Readjustment Act; as of Oct. 31, 1945, the number had increased to 39,439; as of Nov. 30, to 58,582; and as of Dec. 31, to 76,802. In 47 privately owned universities and colleges according to a survey described in *School and Society*, Dec. 29, 1945, veterans constituted 16.1 per cent of the full-time enrollment of 149,389, and in 54 publicly owned universities and colleges (state and municipal) their number was 13.2 per cent of the full-time enrollment of 219,570. In 47 technological schools or institutes, with a full-time enrollment of 57,574, the percentage of veterans was 18, and in 307 independent colleges of arts and science, with a full-time enrollment of 145,946 the percentage was 8.3. According to a Veterans Administration report released in Jan., 1945, "41 per cent of more than 100,000 veterans studying under the Servicemen's Readjustment Act of 1944 are enrolled in 38 of the larger and better-known schools. In prewar years these 38 schools had approximately 25 per cent of the total school enrollment." It is estimated, however, that by the end of 1946 a total of 800,000 servicemen will have enrolled as full-time or part-time students.

Enrollment in Modern Foreign Languages. According to a survey of 672 junior colleges, colleges, and universities, reported in *Crofts Modern Language News*, a total enrollment gain of 17.3 per cent over the comparable figure for 1944 took place in the fields of French, German, and Spanish. Registration

for courses in French was 65,214, an increase of 24.2 per cent over the figure for the preceding year; for courses in German, 44,997, an increase of 20.7 per cent; and for courses in Spanish, 98,475, an increase of 12.8 per cent.

URANIUM. The utilization of the phenomenon of nuclear fission of uranium as the cornerstone of development of the atomic bomb brought worldwide attention in 1945 to this element, which heretofore had been little known. Estimates of composition of the earth's crust show it to be present in considerable quantity (about four parts per million) and far more abundant than such common metals as zinc, lead, tin, silver or gold. It occurs in amounts detectable by the spectrograph and Geiger-Müller counter in most granite and sedimentary rocks.

Although the sources from which it is known to be recoverable by commercial methods are not as numerous as its general abundance would indicate, uranium minerals have been commercially mined in the United States, Canada, Belgian Congo, Czechoslovakia, Portugal, Australia and Sweden. Mining engineers believe that commercial production also is feasible in Russia, Bulgaria, Germany, Madagascar, England, Brazil, and India. Uranium is always found with radium although in much larger quantity, and both uranium and radium are often found with vanadium ores.

Probably the world's richest deposit is that of the Union Minière du Haut-Katanga, at Katanga, Belgian Congo, which commenced production in 1921. Concentrates were shipped to Olen, Belgium, for

refining before the outbreak of the war, after which the entire production went to the United States. This firm and a leading Canadian producer formed a world cartel, which was dissolved in 1941, to divide the radium market between them. The Canadian producer, Eldorado Mining & Refining, Ltd., mined a deposit in the Great Bear Lake region of Northern Canada which in 1938 was claimed to comprise reserves of 60,000 tons of ore containing 1 percent U_3O_8 . Production since has proved these reserves to be vastly larger. Refining is done at Port Hope, Ont.

Prior to 1930 considerable production of uranium salts originated from uraninite-bearing veins at Joachimstal, Czechoslovakia, but more recently this production has been far overshadowed by that of Belgian Congo and Canada. In the United States, uranium has been commercially produced in association with vanadium in carnotite ores of western Colorado, eastern Utah, and to a lesser extent northeastern Arizona. During peacetime, uranium salts, selling at about \$1.50 per lb., were used in coloring glass and pottery brown, yellow and yellow-green; as a mordant in dyeing and in photography.

In the atomic bomb project emphasis was on securing metal of sufficient purity at reduced cost. Methods were developed of securing a pure black uranium oxide which was put through an ether extraction process for further reduction in impurity content, with a brown dioxide as the final product. This oxide is now used as a starting point for all metal production. Improved refining methods reduced the cost of metal from \$1,000 per lb. when experiments started, to \$22 per lb. at the end of 1942. No further cost figures have been revealed, nor have the details of the metal-making methods which were eventually utilized.

CHARLES T. POST.

URUGUAY. A South American republic. Area: 72,172 square miles. Population: 2,185,626 (1941). Capital: Montevideo.

Uruguay is mostly a land of hills and rolling plains, with coastal lowlands on the south and east. Annual temperatures range from about 50 degrees to about 72 degrees.

Government. Under the Constitution of 1934, Uruguay is a centralized republic of 19 departments. The Congress is bi-cameral, with a Senate of 30 members and a Chamber of Deputies of 99. Members are elected every 4 years. The Congress meets annually from Mar. 15 to Dec. 15, except in election years. The President is elected for a 4-year term and may be reelected after a lapse of 4 years. A Cabinet of 9 members aids the President. President Juan José Amézcaga assumed office on Mar. 1, 1943.

The People. Ninety per cent of the population of Uruguay consists of persons of European descent; most of the rest are mestizos. Densities of population range from 12.7 per square mile in the Department of Artigas to 108.6 in the Department of Canelones. Greatest density is in the southern littoral; elsewhere the population is evenly but thinly distributed. The largest cities are: Montevideo, 695,000; Paysandú, 50,000; and Salto, 48,000.

The official language is Spanish. Roman Catholicism is the predominant religion.

In 1938 it was estimated that 65 percent of the total population was literate. In 1941 there were a total of 220,833 students in 1,768 primary schools; 98 intermediate schools had a total enrollment of about 27,000 students. In 1937 the National University had 2,670 students. The Uruguayan Gov-

ernment in 1944 authorized expenditure of 10,000,000 pesos for city and rural school construction throughout the republic.

National Economy. Uruguay's economy is pastoral and agricultural. Stock raising is the most important industry. Meat and meat products, wool, hides and bristles are major exports of the country. Other pastoral exports include dairy products, casein, and cheese. Cattle slaughtered in 1944 totaled 636,318 head. Production of tanned cattle hides and sheepskins totaled 1,062,052 pieces during 1944. Agriculture is the second industry in importance. Wheat, corn, and oats are the leading domestic crops, and linseed is raised for export.

In addition to meat packing and processing (freezing, canning and dehydrating), Uruguay manufactures a wide variety of goods. Among the most important are: cotton and woolen textiles, electrical machinery, batteries, transformers, refrigerators, automobile tires and tubes, furniture, enamelware, glass, and glassware, wines, and pharmaceuticals.

Foreign Trade. Uruguay's exports in 1944 reached a total value of \$97,559,000. Wool was the chief export commodity, and accounted for 41 percent of the total value of all exports; meat and meat products ranked second amounting to 30.5 percent of total value; hides and bristles 11.4 percent. The United States was the leading purchasing country, and took 47.7 percent of the total exports in 1944; Great Britain came second; purchasing 32 percent of the total; Brazil took 3.5 percent, and Argentina 2.8 percent. Venezuela, Mexico, Peru, and Ecuador together bought about 1.6 percent of the total. The leading Uruguayan exports in 1944, according to value, were: wool, \$40,919,000; meat and meat products, \$29,721,000; hides and bristles, \$11,133,000; agricultural products, \$5,972,000; yarn, thread, textiles and their manufactures \$5,056,000; mineral products, \$2,220,000; miscellaneous manufactures, \$1,866,000.

Uruguay's imports in 1944 were valued at \$72,446,000, approximately 13.5 percent higher than imports in 1943. Raw materials accounted for 30.7 percent of total imports; fuels and lubricants 20.3 percent, and foodstuffs, 13.5 percent. The United States furnished 26 percent of Uruguayan imports in 1944; Brazil 22.2 percent, and Argentina 12.8 percent. Venezuela, Ecuador, Peru, Paraguay, Chile, Mexico, Cuba and Colombia together supplied an aggregate of 19.7 percent. The leading import commodities for 1944 listed according to value were: raw materials, \$22,199,000; fuels and lubricants, \$14,721,000; foodstuffs \$9,781,000; general merchandise \$7,612,000; construction materials \$7,061,000; general machinery and parts, \$1,741,000; hardware, \$1,463,000; drugs and chemicals \$1,160,000.

Imports for 1945 were \$114,800,000 of which the United States provided \$29,100,000; Brazil \$19,300,000; Argentina \$11,800,000; and Great Britain \$4,500,000.

Events. The year opened with rumors of a revolutionary plot in Uruguay. President Juan José Amézcaga ordered an investigation, and as a result, fifteen persons, including two German nationals, were arrested in Montevideo on Jan. 5. Nine of the fifteen were released the next day, and the Interior Minister announced that no plot against the Uruguayan Government had been revealed. But it was said that the detained arrestees were members of an international Nazi spy ring, with contacts in Argentina. Ten more persons accused of pro-Axis activities were arrested on Apr. 4; the courts ordered the release of five of them.

A declaration of war against Germany and Japan, opposed by the rightist opposition *Herrerista* Party was approved by Congress on Feb. 21. The Chamber of Deputies passed the measure by a vote of 72 to 19, while the Senate vote was 21 to 7.

On Apr. 24, in response to a Soviet request that the Montevideo Government prevent local papers from characterizing the U.S.S.R. as a "totalitarian" state, the Minister of the Interior said that his Government could not censor the press, but that it would "facilitate and support" any legal action which the Soviet Legation might bring against any specific paper.

As an indirect result of this incident, 96 persons were injured, including Interior Minister Juan José Carbaja Victorica and police head Juan Gómez Folle, and 74 were arrested in riots on May 2. "Apparently Communist" groups celebrating the fall of Berlin had attempted to force the daily *El Día's* building to fly the Soviet flag. The clash occurred when mounted police attempted to drive off the demonstrators. Communist deputies demanded the resignations of Carbajal and Gómez, while *El Día* proclaimed the next day that "We did not fly the Communist flag, because we are not Communists. We celebrate the triumph of liberty and not a Soviet victory." The Government abandoned its plans to call a national holiday on May 3.

Another repercussion to the incident was the resignation on May 9 of Acting Foreign Minister Eduardo Albanell McColl. He charged that the Interior Minister had exceeded his jurisdiction by releasing the Uruguayan reply to the Soviet demand for censorship before the Foreign Ministry could act on the matter. The President refused to accept his resignation. On May 16, Amézaga cleared police head Gómez Folle, declaring that "all reports agree that the firm and serene attitude of the Chief of Police and his subordinates prevented the riots from degenerating into tragedy." And on May 24 the Senate voted unanimous endorsement of the Interior Minister's conduct. Carbajal told the Senators that he did not hold the Soviet Legation or Government responsible for the May disturbances. "Local Communist fanaticism" was responsible, he said, adding that "he would be a foolish politician who believed that the understanding among international Communist leaders has ended."

Communist attacks on Carbajal continued, and were extended in June to include Foreign Minister José Serrato, who was alleged to have called the Soviet Union an enemy of democracy during the San Francisco UNO conference.

Late in June President Amézaga faced his first serious political crisis when followers of former President Alfredo Baldomir decided to withdraw their support of the administration because they objected to its financial policies, and Baldomirista ministers resigned.

On Aug. 16, the Chamber of Deputies cleared President Amézaga of charges that he had used his public office to benefit a private firm with which he is connected.

The entire Cabinet resigned on Sept. 26 to give the President a free hand in reorganizing his administration. The crisis was only settled finally on Oct. 11, when a new Cabinet, with a broader party representation, was completed.

The President's life was believed momentarily endangered on Nov. 23 when Germinal Guida, a 24-year-old student, accosted him on the street and assailed him verbally "in the name of the fatherland." Guida was quickly seized. The police reported that he was deranged and had no political

affiliations. But it was found that he carried a revolver in his pocket.

Late in November the State Department of the United States released a note from the new Uruguayan Foreign Minister, Alberto Rodríguez Larreta, proposing that the American republics agree to intervene collectively whenever the Government of one of them denies essential rights or liberties to its people or fail to honor its international commitments. "Non-intervention cannot be converted into a right to invoke one principle in order to be able to violate all other principles with impunity," the document declared. Although Argentina was not mentioned by name, the proposal was clearly aimed against Uruguay's strong River Plate neighbor, with which relations had long been strained.

The United States and a handful of other American governments gave prompt approval to the new "Larreta Doctrine," but most of them were unwilling to abandon the traditional doctrine of non-intervention, and nothing had been done about the Uruguayan proposal by the end of the year. At home, Administration Senators, by a vote of 16 to 15, blocked the opposition *Herrerista* Party's attempt to brand the Larreta proposal as "inconvenient."

HARRY B. MURKLAND.

VATICAN CITY. A sovereign state, officially called the State of Vatican City, established within the city of Rome as the seat of the Papacy (June 10, 1929) in accordance with the Italo-Vatican (Lateran) Treaty of Feb. 11, 1929 (see 1929 Year Book, p. 417). Ruler: The Supreme Pontiff, Pius XII (Eugenio Pacelli), born in 1876; elected Pope (262nd), as successor of Pius XI, Mar. 2, 1939; crowned Mar. 12, 1939.

The area of Vatican City is 108.7 acres, including St. Peter's Square, and in addition 13 ecclesiastical buildings outside of its limits enjoy extraterritorial rights. It has its own coinage, import duties, railway station, and its postal, telegraph, and radio facilities. The estimated population in 1941 was 970. Under the Constitution of June 7, 1929, the Pope exercises full legal, judicial, and executive powers. He delegates administrative authority within Vatican City to a Governor, who is assisted by a counselor general and other officials. The legal system is based on canon law and ecclesiastical rules. The chief advisers of the Pope are the members of the College of Cardinals, who are appointed by him for life and elect his successor upon his death. From Vatican City the 12 committees forming the Curia Romana carry on the central administration of the Roman Catholic Church. Relations between the Church and the governments of the world are conducted by the Papal Secretary of State. The Holy See in 1945 maintained diplomatic relations with 44 governments and had unofficial relations by means of Apostolic Delegates with a number of others.

VENEZUELA. A South American republic. Area: 352,143 square miles. Population: 4,005,000 (1942). Capital: Caracas.

Venezuela has two highland regions: the Guiana highlands occupying nearly one-half of the country in the southeast; and the Venezuelan highlands extending northeastward from the Colombian border to the Caribbean. The Maracaibo lowlands form the extreme northwestern section of the country, and between the highland regions lie the extensive plains of the Orinoco. The northwestern lowlands have hot, humid climate, while the central coastal

region is hot and dry. The hot climate of the Orinoco plains and somewhat cooler climate of the Guiana highlands are subject to extremes of wet and dry seasons.

Government. Venezuela's Constitution of 1936 provides for a federal union of 20 states and 2 territories. The Congress is bi-cameral, with a Senate of 40 members and a Chamber of Deputies of 98. Ninety day sessions of Congress are held annually beginning on Apr. 19. The President is elected by Congress; Senators by the state legislature; and deputies by municipal councils. (This provision was changed in 1945 by constitutional amendment providing for election of deputies by direct vote.) The state and municipal governing bodies are also elected by direct vote. Isaías Medina Angarita became President in 1941 for a 5-year term. In Oct. 1945 the Medina Government was overthrown by revolution, and Rómulo Betancourt became head of a provisional junta.

The People. According to the census of 1941, about 3 per cent of the population of Venezuela was Indian; classification by race, except Indian, is not included in Venezuelan census figures. Densities of population range from 1.0 persons per square mile in the State of Bolívar to 155.9 in the State of Nueva Esparta. Highest regional density is in the vicinity of Caracas. The largest cities are: Caracas, 269,000; Maracaibo, 110,000; and Valencia, 49,200.

Spanish is the official language. Roman Catholicism is the predominant religion.

According to the census of 1936 nearly 30 per cent of the population was literate. In 1941 there was a total enrollment of 272,007 in 5,155 elementary schools; enrollment in 96 intermediate schools totaled 7,213; and there were 2,950 students in two universities. In 1944, seven new elementary schools were established to instruct more than 4,000 pupils, and 6 new high schools are under construction or soon to be built. Student registration in secondary schools in 1944 totaled 11,590. The Normal School in Caracas, with a primary school for 1,000 students was completed in that year.

National Economy. Although agriculture is the basis of Venezuela's economy, the country depends heavily on oil exports. The principal export crops are coffee and cacao, but sugar, corn, rice, potatoes, tobacco, fruits and vegetables, cotton, and sisal are important. Cattle raising is also an important occupation.

Next to the United States, Venezuela is the Western Hemisphere's greatest supplier of oil, and is one of the world's largest exporters of petroleum. Petroleum and its derivatives represented over 93 percent of the total value of exports in 1938 and 90 percent in 1942. In 1944 Venezuela produced 12 percent of the world's oil with a total of 38,340,000 tons, a record production representing an increase of 43 percent over 1943. Total crude oil production in 1944 amounted to 257,045,688 barrels. Venezuela also produces gold and diamonds, about 30 percent of which are industrial diamonds. Other minerals include coal, silver, copper magnesite, tin, asphalt, asbestos, mica and salt.

Manufacturing in Venezuela is largely confined to consumer goods. Cotton textiles, soap, cigars, cigarettes, candles, cheese, and vegetable oils are the chief articles made.

Foreign Trade. In 1942 total exports were valued at 711,600,000 bolivares, and total imports at 215,991,215 bolivares. Petroleum and its derivatives accounted for more than 90 percent of total

exports. In that year about 61 percent of Venezuelan exports were shipped to Curacao and Aruba, and 15 percent to the United States. In 1942 textiles accounted for 18 percent of all imports; food and beverages 17 percent, metals and manufactures 15 percent, machinery and accessories 14 percent, and chemicals 8 percent. That year the United States supplied 73 percent of imports, the United Kingdom 7 percent, Argentina 6 percent and Brazil 4 percent.

For the first 9 months of 1944 the total value of exports, adjusted to represent the market value of petroleum shipments, amounted to 562,900,000 bolivares (\$173,940,000), about a 40 percent increase over the corresponding period of 1943. Shipments of crude petroleum and derivatives during this period were valued at 514,000,000 bolivares (\$158,830,000). Less than 10 percent of the total value of Venezuelan exports is composed of non-petroleum products. Of these coffee and cacao represented 57 percent of the total; gold, cattle, fruits and vegetables, fish products, mineral products, and alcoholic beverages each represented less than 10 percent.

Imports to Venezuela during 1944 were estimated at slightly more than 600,000 metric tons; the value of imports during the first 9 months of the year amounted to 242,600,000 bolivares (\$74,963,000), of which the United States supplied 78 percent. Other South American countries provided 13 percent of the total, and shipments from Europe and other sources accounted for 5 percent.

Events. State legislatures convened throughout the republic on Jan. 2 to take action on Administration-sponsored constitutional reforms providing for direct election of Deputies, federal control of the judiciary, and legalization of Communist and other "exotic" parties. The legislatures would also elect national Senators, and seven of them had local amendments before them calling for choosing of state governors by the legislatures instead of by Presidential appointment.

President Isaías Medina Angarita, in his New Year's message, called for the triumph of democracy in the Americas and asserted that the United Nations' victory would bring "world security, justice, and democracy."

One-half of the Chamber of Deputies was elected by municipal councils on Jan. 19, to take office on Apr. 19. The administration Venezuelan Democratic Party (PDV) won an overwhelming victory.

Foreign Minister Caracciolo Parra Pérez declared on Feb. 16 that "The national Government recognizes the existence of a state of belligerency between Venezuela on one side and Germany and Japan on the other." He stated that the republic had been in a state of belligerency since December, 1941, but that the status had not previously been formally recognized. The Foreign Ministry announced on Mar. 13 that Venezuela and the Soviet Union "have arrived at an accord for the establishment of diplomatic and consular relations"; relations were formally established in Washington the next day.

A convention of the Venezuelan Democratic Party met in Caracas on Apr. 1 to discuss 1946 presidential candidates and to select a new national directorate. The convention approved the administration's foreign policy after Senate Chairman Manuel R. Egana had denounced the nation's state of belligerency with the Axis and adherence to the United Nations declaration as unconstitutional.

A demonstration supporting the return of former President General Eleázar López Contreras to the presidency took place in Los Teques early in April.

Leftist papers accused sectors of the PDV of supporting López.

Congress began its session on Apr. 19, with adoption of constitutional amendments and consideration of agrarian reform its main concerns.

President Medina, in his message to Congress, declared that strengthening of inter-American co-operation was the basic principle of Venezuelan foreign policy. He also stated that government revenues in 1944 amounted to about \$162,000,000; that oil production totaled 40,865,766 cubic meters and was the highest in the nation's history; and that the cost of living rose only 2 percent in 1944.

On April 25 the Chamber of Deputies approved constitutional amendments legalizing Communist activity and permitting women to vote in municipal elections. A few days later the Chamber adopted a resolution condemning dictatorial regimes, particularly those in the Americas. Venezuela's state of belligerency against the Axis and adherence to the United Nations declaration were approved by the Congress on May 2.

President Medina's signature, on May 5, made effective the constitutional reforms legalizing Communist activity, strengthening federal control of state judiciaries, and permitting women to vote in municipal elections.

The largest budget in Venezuelan history was submitted to the Congress in May. It called for some \$148,470,000, of which the largest item, about \$41,400,000, was earmarked for the Public Works Ministry; much of this was to be used for school construction.

The opposition leftist Acción Democrática party opened its convention on May 26 in Caracas. Resolutions approved included demands that the Government sever diplomatic ties with Spain and the Dominican Republic, take an active part in solving the problems of European colonies in the Western Hemisphere (especially Curaçao, Aruba and Trinidad), cooperate in the "liberation" of Puerto Rico, and work for the restoration of Gran Colombia. The party did not nominate a presidential candidate.

The Venezuelan Senate approved early in June a resolution establishing penalties for racial discrimination, as the result of a United States negro singer having been refused admittance by three hotels in Caracas.

The national directorate of the Venezuelan Democratic Party on June 6 rejected López Contreras as the party's presidential candidate for 1946. But the Merida state unit gave López its support, and the General, after being removed from active army duty, started on a tour of the country.

Sixteen leaders of the leftist Unión Popular Venezolana, headed by party leader Juan B. Fuenmayor, resigned from that organization on June 20 to form a Communist party "from which we shall tirelessly fight against reaction until we achieve the ideal of setting up a socialist regime in Venezuela."

The Cabinet was reorganized on July 14 in what political commentators interpreted as a move to strengthen the hand of Medina in the forthcoming political campaign.

Congress adjourned on July 17 after a heated session in which it rejected proposed reforms in labor legislation as well as the projected constitutional amendment providing for direct election of the President. A special session of Congress met on July 23 to consider administration-sponsored alterations in the agrarian and electoral laws and to consider reform of the civil and penal codes as well as to ratify the United Nations Charter.

Politics were upset on the eve of the Venezuelan Democratic Party's nominating convention when it was announced that, because of ill health, Diógenes Escalante, Ambassador in Washington, would not be a candidate for the presidency. His nomination had been virtually certain. The convention was postponed for two weeks while party leaders sought a substitute. Their choice, nominated Oct. 1, was Agriculture Minister Angel Biaggini, who described his politics as center-left.

The opposition leftist Acción Democrática party met again early in October. It refused to support Biaggini nor would it accept López Contreras, who was expected to be Biaggini's major opponent. It suggested that all parties agree on a candidate to take office in May, 1946, for only one year, while the Constitution was being amended to permit election of a President by direct universal suffrage in 1947.

On Oct. 15, an independent group, which called itself the Agrupaciones Pro-Candidatura Presidencial, nominated López Contreras. On Oct. 16, Medina assured López that the Administration would respect the free exercise of all citizens' political rights in the forthcoming campaign. On Oct. 17, the first mass meeting of the recently legalized Communist party was held.

On Oct. 18 the rank and file of the army, led by young officers, revolted. They seized the Maracay army base, and after a day and night of fighting, were masters of Caracas, the port of La Guaira, and several interior towns. There was desultory fighting in Caracas through Oct. 20, and forces in the isolated western states remained loyal to the government in the early stages of the revolt. But by Oct. 21 the rebels were in complete control of the country. The revolt had started among the soldiers, but they were quickly joined by the Acción Democrática party, and a ten-man Provisional Government was set up under the AD leader, Rómulo Betancourt. The young officers had apparently rebelled against the dynasty of older officers like Medina and López who ruled the army as a clique, while Acción Democrática was motivated by the hopelessness of overthrowing Medina's well-entrenched political machine at the polls. And behind both groups, and the popular support they received, was economic discontent.

The program outlined by Provisional President Betancourt promised: (1) restoration of civil liberties as soon as tension eased; (2) permission for all political parties to function within their "constitutional rights;" (3) free press; and (4) convocation of a constituent assembly to frame a new Constitution.

In the economic field, Betancourt outlined a three-point anti-inflationary program: (1) reduced import duties, (2) appeal to the United States for needed transportation equipment, and (3) expansion of national production, particularly agricultural. He declared that his Administration would welcome continued foreign investments on a basis of "mutual profit," and that expropriation of petroleum properties or cancellation of oil leases were not contemplated. The fortunes of former political leaders were frozen pending investigation of the means by which they were acquired; Medina and López Contreras were exiled to the United States; revolutionary army leaders pledged themselves to keep out of politics; and Betancourt reiterated that his regime was transitional and would withdraw as soon as a new government could be elected directly by the people. Pledges of support were received from virtually all organized political and social groups in the country, and

the other American republics recognized the new Government within a few days. The Dominican Republic was an exception. That country's diplomatic staff had been withdrawn from Caracas because of "Scandalous attacks . . . in violation of all international usage." The Dominican action, Betancourt said, had "deprived the revolutionaries of the pleasure of breaking relations with Trujillo."

The Provisional Government devoted itself, during the next two months, to destruction of the old political machine, and preparations for the restoration of political normality. Its primary battle was against the high cost of living. As the year ended, a number of new parties were in process of formation, and a new electoral decree, setting up the machinery for election of a constituent assembly, was nearing completion.

HARRY B. MURKLAND.

VETERANS' ADMINISTRATION. An independent agency of the U. S. Government created in 1930 under an Act of Congress which authorized the President to consolidate and coordinate under a single control governmental Agencies dealing with veterans' affairs. It administers all laws relating to the relief of, and other benefits provided by law for, former members of the military and naval forces.

On June 30, 1945, there were 567,934 United States Government life insurance policies in force representing \$2,454,855,781 of insurance. Disbursements for this type of insurance during the fiscal year 1945 totaled \$32,273,258. Monthly payments on yearly renewable term insurance policies were being made to 9,301 permanently and totally disabled veterans and to the beneficiaries of 2,042 deceased veterans. Disbursements for term and automatic insurance during the fiscal year 1945 were \$19,756,072, including \$12,941,477.28 transferred to the U.S. Government life insurance fund for cases traceable to extra hazards of military or naval service, making a net disbursement of \$6,814,594. During the fiscal year there were approved 2,206,813 applications for National Service life insurance aggregating \$20,398,204,000 of insurance. The policies in force on June 30, 1945, totaled 15,944,158 representing \$123,579,575,163 of insurance. Benefits had been awarded on June 30, 1945, in 223,626 cases on insurance valued at \$2,039,225,100. The average contract insurance in force at the time of the veteran's death was \$9,191. Disbursements during the fiscal year 1945 for this type of insurance totaled \$136,846,767. Through June 30, 1945, there had been received 103,227 applications for insurance benefits under the Civil Relief Act of October 17, 1940. Of this number 87,037 applications representing \$216,993,141 of insurance had been approved.

On June 30, 1945, the total hospital load was 71,439 patients, of whom 71,229 were United States veterans. Of the United States veterans, 66,818 were in Veterans' Administration hospitals, 2,958 in other Government hospitals, and 1,453 in Civil and State institutions. On the same date, the veteran population in domiciliary status in Veterans' Administration homes totaled 8,779. In addition, an average of 4,159 veterans was cared for in State or Territorial homes during the fiscal year 1945.

Payments for pension, compensation or retirement pay were, on June 30, 1945, being paid to 1,144,088 living veterans and to the dependents of 369,498 deceased veterans. The net disbursements during the fiscal year for this purpose totaled \$739,581,650.59.

As of June 30, 1945, there were 14,986 veterans of World War II receiving vocational training to overcome the handicap of a service connected disability. On the same date there were 764 cases in which the veteran had been rehabilitated. As of June 30, 1945, there were 22,335 veterans receiving education and training under the provisions of Public Law 346, 78th Congress; and those who had completed courses were numbered 900.

The net disbursements made by the Veterans' Administration during the fiscal year 1945 from all appropriations and trust funds totaled \$2,271,318,333. This amount includes adjustments on lapsed appropriations but does not include disbursements from trust funds for investment purposes.

OMAR N. BRADLEY.

VIRGIN ISLANDS, U.S. An insular possession of the United States, situated about 70 miles east of San Juan, Puerto Rico. This possession, acquired in 1917 for \$25,000,000 through a treaty with Denmark, forms part of the chain of the Lesser Antilles which extends from Puerto Rico to the coast of South America. Of the 50 islands in the group only the three largest are inhabited—St. Thomas, St. John, and St. Croix. Total area, 132 square miles; population, 24,889 in 1940; 22,012 in 1930. Areas and populations (1940) of the individual islands: St. Thomas, 28 square miles, 11,265 inhabitants; St. John, 20 square miles, 722 inhabitants; St. Croix, 84 square miles, 12,902 inhabitants. Of the whole population, 69 per cent in 1940 were Negroes, 22 per cent of mixed race, 9 per cent whites; 1942's birth rate 34.8, death rate 18.9, per 1,000. Capital, Charlotte Amalie (pop. 9,801 in 1940) on the island of St. Thomas. Illiteracy is practically confined to the population over 21 years of age (16 per cent in 1930). Most of the people speak English.

Defenses. The islands are the most eastern outpost of the United States and are situated so as to furnish protection both to United States holdings in the Caribbean Sea and the Panama Canal. The fine harbor of Charlotte Amalie provides shelter for as many as 23 warships at one time. Defenses constructed in this region during the past few years have been primarily to bulwark the great naval, military, and air bases in Puerto Rico. They include a permanent U.S. Marine Corps air base near Lindbergh Bay on St. Thomas, a large submarine base at Charlotte Amalie Harbor, and a U.S. Army air base on St. Croix near Frederiksted.

Production and Trade. St. Thomas has largely depended upon commerce, trade, and shipping, and its resources have grown by defense activities. On the other hand the municipality of St. Croix has depended chiefly upon agriculture for its revenues. During recent years there have been repeated droughts resulting in decreases in sugar production and cattle raising, with resulting unemployment.

Finance. For the fiscal year ended June 30, 1944, actual revenues of the municipality of St. Thomas and St. John were \$1,617,705 while total budget appropriations were \$1,559,989. Revenues of the municipality of St. Croix were \$262,685 in 1943-44 while total budget appropriations were \$412,515. The Federal appropriation for the Government of the Virgin Islands in 1943-44 totaled \$373,635, of which \$186,820 was for the central administration, \$46,815 for the agricultural experiment station, and \$140,000 for the deficit of the municipality of St. Croix.

Government. During the first 14 years of American control the Virgin Islands had a naval government.

In 1931 jurisdiction was transferred from the Navy Department to the Department of the Interior and a civil governor was appointed by the President. Congress passed an Organic Act for the islands in 1936 which effected little change in the structure of the government although it did allow for a greater measure of political freedom. The autonomy of the two municipalities was retained and both have Municipal Councils, which when called in joint session, constitute the Legislative Assembly. The Governor is appointed by the President and holds office at his pleasure. Governor in 1945, Charles Harwood (assumed office, Feb. 3, 1941).

Events, 1945. Shortly after the military defeat of Germany, Congress authorized an appropriation of \$10,000,000 for public improvements, such as hospitals, sewerage systems, water supplies, schools, streets, highways, recreational facilities, telephone and radio communications, malaria control projects, slaughterhouses, and markets. \$150,000 of this appropriation was set aside for an engineering survey. The projected improvements were scheduled to take place over a period of five years. A large reconstruction program was planned which would convert these islands into a popular tourist resort and convalescent center for veterans.

President Truman nominated Judge William H. Hastie, dean of Howard University Law School, to succeed Governor Charles Harwood. A former justice of the U.S. Circuit Court in the Virgin Islands from 1937 to 1939, and the first Negro to serve on the Federal bench, Judge Hastie's nomination was to be sent to the U.S. Senate on January 14, 1946, for confirmation.

CHARLES F. REID.

VITAL STATISTICS. During October, 1945, the total population of the United States passed 140,000,000. Some months earlier the estimated number of families reached 37.5 million, a rise of 2.5 million since the last Census in 1940.

Owing to high wartime birth rates, the population under five years was about 2.5 million greater than in 1940, this increase equalling a year's total births in normal times. On the basis of State reports for the first eleven months, total births were 2,730,000, 2.3 percent under 1944.

In the five and a quarter years from April 1, 1940, to July 1, 1945, the nation added over 8 million new Americans. Of these, net civilian immigration accounted for 594,109, there being excesses of arrivals over departures; of immigrant aliens, 143,437; non-immigrant aliens, 184,972; U.S. citizens, 265,700. While the birth rate dropped somewhat from the preceding year's high figure, the death rate went down also, reaching 10.4 per 1,000 in spite of military losses. Infant mortality in particular made a better showing, being held down to 37.8 per 1,000 live births.

The over-all picture is indicated by November's record: births, 19 per 1,000 of total population including the armed forces overseas; deaths, including military losses, 10.3 per 1,000.

There were 1,600,000 marriages during the year, 10.8 percent more than in 1944, and only 1 percent under 1942, the peak year for the nation. See MARRIAGE STATISTICS.

Causes of Death. The three leading causes of death in the United States have strengthened their position during the war years while decreases occurred in the death rates for nephritis, tuberculosis, pneumonia and influenza, Director J. C. Capt of the Bureau of the Census announced:

"Diseases of the heart accounted for 29.6 percent of the deaths in 1944, excluding the armed forces

overseas, as compared with 29.2 percent in 1943 and 26.9 percent of the deaths in the three-year period, 1939-1941."

The second leading cause of death, cancer and other malignant tumors, resulted in 12.1 percent of the deaths in 1944 compared with 11.4 percent in 1943 and 11.2 in the 1939-1941 period. The third leading cause of death, intracranial lesions of vascular origin, was responsible for 8.8 percent in 1944 compared with 8.7 percent in 1943 and 8.4 percent in the 1939-1941 period.

On the other hand, nephritis caused 6.5 percent of the deaths in 1944 compared with 7.5 percent in the 1939-1941 period; pneumonia and influenza 5.8 percent compared with 6.6 percent; and tuberculosis 3.9 percent in 1944 compared with 4.3 percent in the 1939-1941 period.

Deaths from the 10 leading causes formed 76.7 percent of all deaths in the 1939-1941 period, a proportion which increased to 77.9 percent in 1943 and to 78.3 percent in 1944.

While there were 1,411,338 deaths from all causes in 1944, a decline of 48,206 from 1943, there were 4,323 more deaths from cancer and other malignant tumors and 459 more deaths from motor vehicle accidents. Yet the 1944 death rate for motor-vehicle accidents, 18.3 per 100,000 population, was 32.2 percent below the motor-vehicle accident death rate of 27.0 for the 1939-1941 period, a decrease due chiefly, if not entirely, to the wartime restrictions imposed on speed, tires and gasoline.

The following tables give the number of deaths from the 10 leading causes, and death rates per 100,000 estimated population, excluding the armed forces overseas, for the years 1944, 1943, and the average for 1939-1941.

NUMBER OF DEATHS FROM THE 10 LEADING CAUSES OF DEATH UNITED STATES, 1944, 1943, AND AVERAGE FOR 1939-1941

Causes	1944	1943	Average 1939-1941
All causes	1,411,338	1,459,544	1,400,936
Diseases of the heart . . .	418,062	426,391	377,322
Cancer and other malignant tumors	171,171	166,848	157,369
Intracranial lesions of vascular origin	124,250	127,300	117,768
Nephritis	91,687	99,267	105,272
Pneumonia (all forms) and influenza	81,804	90,115	92,201
Accidents excluding motor-vehicle accidents	70,955	75,215	61,388
Tuberculosis (all forms)	54,731	57,005	60,429
Diabetes mellitus	34,948	36,314	34,096
Premature birth	33,120	34,563	32,646
Motor-vehicle accidents	24,282	23,823	35,619

DEATH RATES PER 100,000 ESTIMATED POPULATION, EXCLUDING THE ARMED FORCES OVERSEAS

Causes	1944	1943	Average 1939-1941
All causes	1,064.7	1,089.5	1,061.7
Diseases of the heart	315.4	318.3	285.9
Cancer and other malignant tumors	129.1	124.5	119.3
Intracranial lesions of vascular origin	93.7	95.0	89.2
Nephritis	69.2	74.1	79.8
Pneumonia (all forms) and influenza	61.7	67.3	69.9
Accidents excluding motor-vehicle accidents	53.5	56.1	46.5
Tuberculosis (all forms)	41.3	42.6	45.8
Diabetes mellitus	26.4	27.1	25.8
Premature birth	25.0	25.8	24.7
Motor-vehicle accidents	18.3	17.8	27.0

VOCATIONAL REHABILITATION, Office of. An agency of the U.S. Government which is the central instrument in the Federal-State system for restoration of disabled persons to the fullest physical, mental, social, vocational and economic usefulness of their capabilities. Established July 6, 1943, as a constituent of the Federal Security Agency, the Office of Vocational Rehabilitation is charged with certification of Federal funds for States' use in rehabilitation work, establishing standards in the various areas of service and furnishing technical assistance to the States.

The system is financed through grants-in-aid from the Federal Government to the States.

During the fiscal year 1945, 161,047 disabled persons received services from 51 State general rehabilitation agencies and 27 commissions for the blind. Of this number, 41,925 disabled men and women returned to gainful employment and their cases were closed to the satisfaction of both employer and employee. The types and extent of disabilities overcome through the 1945 rehabilitation program are reflected in the following breakdown:

Orthopedic involvements other than cerebral palsy and poliomyelitis, 11,235 cases; amputations and congenital absence of members, 7,304; vision defects, 3,806; hearing defects, 3,597; poliomyelitis, 2,992; pulmonary tuberculosis, 2,497; mental, 2,354; cardiac, 1,760; hernia, 1,364; cerebral palsy, 627; asthma, 583; speech defects, 286; other, 3,344; not reported, 176.

The far-reaching effects of the Federal-State program during the past fiscal year is evidenced in the fact that whereas the annual income of these men and women totaled only \$12,000,000 before rehabilitation, and a large part of this consisted of contributions, they were earning at the rate of \$72,000,000 a year after rehabilitation.

Services to render the handicapped more advantageously employable, provided under Federal and State laws, include medical, surgical and psychiatric care, hospitalization, artificial appliances, vocational guidance and training, maintenance during training, and placement in employment. Physical examination, counsel and training are provided without cost to the applicant in all cases; other services are provided without cost to the extent of the applicant's inability to pay for them.

The Vocational Rehabilitation Act of 1920 was the activating force for the program, and its scope was expanded by amendment in 1943. Under the new amendments, mentally as well as physically disabled individuals now are eligible for rehabilitation services. Specific provision is made for the blind; war-disabled civilians such as members of the citizens defense corps, aircraft warning service, civil air patrol, the merchant marine, and United States civil employees.

Fiscal provisions have been liberalized. Grants to the States may now be based on actual requirements and the amount of State funds available for matching. Under the 1943 amendments, the Federal Government assumes the entire cost of administering State programs, and half the costs of medical examinations, surgical and therapeutic treatment, hospitalization, prosthetic devices, transportation, occupational tools and licenses, training and maintenance. The Federal Government assumes the entire cost of these items for war-disabled civilians.

State programs are administered by Divisions of Rehabilitation within the State Boards of Vocational Education. Where there is a State Commission or other agency authorized to provide rehabil-

itation services for the blind, that Commission or Agency administers the part of the rehabilitation program pertaining to that group.

The program is in operation in all 48 states, the District of Columbia, Hawaii and Puerto Rico. The Office of Vocational Rehabilitation maintains seven regional offices for close working relation between the States and the Federal offices. Regional offices are located as follows: Boston (covering Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island and Vermont); Washington (covering Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania, Virginia and West Virginia); Atlanta (covering Alabama, Florida, Georgia, Mississippi, North Carolina, Puerto Rico, South Carolina and Tennessee); Chicago (covering Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin); Kansas City (covering Arkansas, Kansas, Louisiana, Missouri, New Mexico, Oklahoma, Texas); Denver (covering Colorado, Idaho, Montana, Utah, Wyoming); and San Francisco (covering Arizona, California, Hawaii, Nevada, Oregon and Washington).

MICHAEL J. SHORTLEY.

VOLCANO ISLANDS. A chain of islands in the western Pacific, about 710 miles south of Tokyo; also known as *Kazan Retto*. Iwo Jima, the principal island has an area of 8 square miles, and has a number of peaks—the highest being Suribachi (546 ft.) at the southern tip of the island. The other islands are Kita, and Minami. Total area: 10 square miles. Population (1940 estimate): 1,151. Under Japanese rule, Iwo Jima was a fortified air-base. On Mar. 16, 1945, it was captured by armed forces of the United States after a 26-day battle.

WACS. The women's auxiliary of the U.S. Army. For its organization (as WAAC), see *YEAR BOOK* for 1942, p. 757. The number of Wacs in the service during 1945 was approximately 100,000. Recruiting was discontinued after Sept. 1, 1945.

WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS. These Divisions of the U.S. Department of Labor administer the Fair Labor Standards Act of 1938, commonly called the Federal Wage and Hour Law, and the Walsh-Healey Public Contracts Act. Thirteen directors head the regional offices and Minnesota and North Carolina have special cooperative agreements with the Divisions to enforce the Acts.

Pursuant to the industry committee procedure provided by Congress, wage orders prescribing a 40-cent minimum wage were established for all employees covered by the Fair Labor Standards Act, numbering more than 20,000,000, in the United States, outside of Puerto Rico and the Virgin Islands. These wage orders were established more than a year in advance of Oct. 24, 1945, the statutory deadline for a universal 40-cent minimum in the United States, except for Puerto Rico and the Virgin Islands. Special minimum wage rates have also been set for all industries in Puerto Rico and, with a few minor exceptions, all industries in the Virgin Islands.

During the fiscal year which ended June 30, 1945, 44,271 inspections were completed under both Acts and 42,613 establishments were found subject to the Acts' provisions. Of the 44,271 establishments inspected, 32,834 or 74 percent were found in some violation, while 22,257 or 50 percent were in violation of the minimum wage or overtime provisions of the Acts.

Restitution of \$15,824,377 of illegally withheld wages was agreed to or ordered paid to 442,516 workers in 19,064 establishments. The amount of restitution found due per inspected establishment was higher than the previous year, reaching an all time high. Failure to pay the minimum wage of 30 to 40 cents an hour was involved in more than a fourth of these cases and restitution of such minimum wages was found due more than 77,000.

In the six years and nine months that the Fair Labor Standards Act had been in force through the end of the fiscal year, about \$85,000,000 in restitution of illegally withheld wages had been agreed to or ordered paid to almost 2,500,000 workers in about 110,000 establishments, with more than two-fifths of the cases involving failure to pay the minimum wage of 40 cents an hour. More than this amount has probably been collected in addition over the period, through private negotiation or action by employees and their unions under a section of the Act which provides that if an employee has not been paid the minimum wage or time-and-half overtime after 40 hours a week, he shall be entitled to an additional equal amount as liquidated damages.

Since many establishments are covered under both the Fair Labor Standards and Public Contracts Acts, each of which may call for the payment of restitution in any given case, it is impossible to give separate figures for restitution found due under either Act. Of the 44,271 inspections completed during the year, 9,384 were made under the Public Contracts Act, and of these all but 160 were concurrent with Wage-Hour inspections. Violations were found in 54 percent of the Public Contracts inspections, and 32 percent of such inspections disclosed violation of the minimum wage or overtime provisions.

With more than three times as many minors in the labor force as there were before the war, the number of child labor violations under both Acts continued to increase. During the year, approximately 3,500 establishments employing minors in violation of the Fair Labor Standards Act were reported to the Children's Bureau by the Wage and Hour and Public Contracts Divisions. Over two-thirds of these establishments were in violation of the Act's child labor provisions, employing more than 13,000 minors in "oppressive" child labor. Nearly 20 percent more establishments were found in violation last year than during the preceding fiscal year and over 100 percent more than during 1943, while the number of minors illegally employed increased 58 percent over 1944 and 191 percent over 1943.

The child labor provisions of the Public Contracts Act provide that no boy under 16 or girl under 18 shall be employed on Government contracts in excess of \$10,000. A former wartime exemption permitting employment of girls between 16 and 18 years of age under certain conditions has been revoked, so that under no circumstances may girls under 18 be employed on contracts awarded after September 4, 1945. During the year, almost 700 firms were penalized for child labor violations under the Public Contracts Act, and the liquidated damages (\$10 for each day that each minor is employed under conditions prohibited by the Act) amounted to almost \$800,000. Although, due to a decrease in staff, inspections under the Public Contracts Act along with Wage-Hour inspections decreased during 1945 by approximately 20 percent from the previous year, the number of establishments in which child labor violations were found increased by 50 percent.

The Wage and Hour and Public Contracts staff is charged further with the inspection of safety and health conditions in those plants holding public contracts.

Following a decision of the Supreme Court, sustaining the Administrator's authority to restrict industrial homework under Section 8(f) of the Fair Labor Standards Act, an extensive homework enforcement program was initiated in the seven industries for which regulations restricting homework had been issued by the Administrator: Jewelry Manufacturing, Gloves and Mittens, Knitted Outerwear, Button and Buckle Manufacturing, Women's Apparel, Handkerchief Manufacturing and Embroideries. No homemaker may be employed in any of these restricted industries unless a special homework certificate is obtained from the Divisions permitting his or her employment. Homework handbooks issued by the Divisions must be supplied to and kept for homeworkers in these industries, and all other homeworkers covered by the Fair Labor Standards Act and their employers must preserve and maintain pay roll or other records for each and every one of them in accordance with homework record-keeping regulations issued by the Administrator.

During the year, proceedings for injunctions against future violations of the wage and hour provisions were instituted in 371 cases, while the criminal penalties which the statute provides for cases of wilful violation were invoked in 39 cases. In an additional 39 cases the Department of Justice authorized criminal prosecutions which had not yet been commenced at the close of the year. Contested cases showed a substantial increase over the previous year, with 106 cases contested.

Significant among the decisions of the U.S. Supreme Court relating to the Fair Labor Standards Act were three cases concerning the interpretation of the overtime provisions of the Act: *Walling v. Helmerich & Payne*, *Walling v. Youngerman-Renolds Hardware Co.*, and *Walling v. Harnishfeger Corp.* All three disapproved wage agreements designed to avoid payment of the overtime premium, and made it clear that agreements stipulating a rate which is not the actual regular rate do not meet the statutory requirements.

Another decision of great public interest was *Jewell Ridge Coal Corp. v. United Mine Workers of America, Local No. 6167*, which held that underground travel in bituminous coal mines was work or employment compensable under the Act.

During the war, along with the regular enforcement of the Fair Labor Standards Act and the Public Contracts Act, the Divisions participated in the Wage Stabilization program as agents of the War Labor Board. Many requests for rulings and applications for voluntary increases as well as jurisdictional and interpretative questions were handled, and inspections of employers' records were made to determine conformity to wage stabilization policies.

Equally important during the war was the special service rendered by the Divisions' trained factory inspection forces in connection with the original tire inventory for the Office of Price Administration, production requirement audits for the War Production Board, and inspections to determine adherence to the War Manpower Commission's regulations imposing restrictions in the employment of labor.

L. METCALFE WALLING.

WAKE ISLAND. An atoll consisting of three islets—Wilkes, Peale and Wake—which are separated by

narrow shallow channels and enclose a triangular lagoon $4\frac{1}{2}$ miles long. Total area: 4 square miles. Its location makes it valuable as a cable station between Hawaii and the Philippine Islands and between Midway and Guam. Wake lies 2,130 miles west of Honolulu and 1,185 miles west of Midway. Previously uninhabited until May, 1935, Wake Island became an air depot on the transpacific route of Pan American Airways. Construction of a U.S. naval air base and submarine base was begun on April 19, 1939, and these installations were partially completed at the time of the Japanese attack on December 8 (December 7 in the U.S.). On Dec. 23, 1941, the island was surrendered to overwhelming Japanese armed forces.

Events, 1945. Between Feb. 24, 1942, and July, 1945, the island was effectively blockaded by air and sea and was the target of intermittent attacks by ships and bombers. On July 7 a U.S. Navy warship stood by without firing a shot to allow a Japanese hospital ship the right to evacuate 974 starved, sick, and wounded patients. On September 4 the American flag flew over Wake Island after 43½ months of Japanese occupation. The surrender document was signed aboard the destroyer escort U.S.S. *Levy* by Rear Adm. Shigematsu Sakaibara, Japanese commander, who turned over the island, his 1,250 men, and his command to Brig. Gen. Lawson Sanderson, head of the 4th Marine Aircraft Wing.

CHARLES F. REID.

WAR COMMUNICATIONS, Board of (BWC). The Board of War Communications (formerly the Defense Communications Board) was created by Executive Order, Sept. 24, 1940, to coordinate plans for the most efficient use of the country's radio, wire, and cable facilities during the national emergency. After Pearl Harbor, the President empowered the Board to use, control, or close down communications facilities where necessary to the war effort and to set up preferences or priorities in the handling of essential war communications.

The Board membership is composed of the Chairman of the Federal Communications Commission, who, under the order creating the BWC, also serves as Chairman of the Board; the Chief Signal Officer of the Army; the Director of Naval Communications; the Assistant Secretary of State in charge of the Division of International Communications; and the Assistant Secretary of the Treasury in charge of Treasury Enforcement Activities. The Chief of Communications of the U.S. Coast Guard serves as Assistant Secretary to the Board.

The BWC has no paid personnel, appropriations, or funds. It operates through a Coordinating Committee and a Law Committee staffed by personnel from the five agencies represented on the Board. A Labor Advisory Committee and an Industry Advisory Committee submit recommendations to the Board on problems referred to them. There are, in addition, twelve numbered committees, made up of experts in all fields of wire and radio communications, who serve the Board in an advisory capacity.

In light of the conditions during the 1945 calendar year, the BWC issued seven orders canceling or lessening restrictions imposed by previously issued orders, deemed necessary for the national security and defense and the successful conduct of the war.

The orders still operative are: No. 1, directing that all radio station facilities aboard all vessels within jurisdiction of the U.S. shall be subject to use, control, supervision, inspection, or closure by

the Navy Department, if deemed necessary for national security; No. 2, authorizing the Navy Department to use, control, supervise, inspect, or close coastal and marine relay radio stations; No. 4, requiring registration with the FCC of apparatus which generates radio-frequency energy; No. 20, prescribing regulations governing priority for urgent telephone toll calls; No. 22, prohibiting the leasing of communications circuits in submarine cables without prior approval of the BWC; No. 24, authorizing the use and control of international radio broadcast stations WRUL, WRUS, and WRUW by the OWI; No. 26, outlining priority for urgent teletypewriter exchange messages essential to the war effort or public safety; and No. 27, 27A, 27B, and 27-C, outlining the precedence for telegraph messages essential to the war effort or public safety.

PAUL A. PORTER.

WAR DEPARTMENT. The Department of the U.S. Government which is charged with the responsibility of organizing, training, and maintaining the Army and certain non-military activities; created in 1789, succeeding a similar department which was established prior to the adoption of the Constitution. For organization and activities, see the articles on MILITARY PROGRESS and WORLD WAR in this and preceding YEAR BOOKS. Secretary of War in 1945: Robert P. Patterson; Under Secretary, Kenneth C. Royall.

WAR FINANCE DIVISION. A Division of the U.S. Department of the Treasury, organized under this name on June 25, 1943. Originally established as the Defense Savings Staff in 1941, and changed to War Savings Staff in 1942 (see previous YEAR BOOKS) its purpose is to stimulate the sale of securities, popularly known as War Savings Bonds and Stamps, offered to the public by the Treasury Department.

The War Finance Division and the War Finance Committees operate through four main branches: Banking and Investment, Labor and Industry, Community, and Promotion and Publicity, all under the direction of the National Director, who reports to the Secretary of the Treasury. The sales organization (field) consists of offices in all States, District of Columbia, Hawaii, Alaska, and Porto Rico, actively operating in the recruiting of volunteer committees, sales, and promotional personnel. The Washington organization plans campaigns and advises and services the field workers.

The Division enjoys the cooperation of all advertising media, including newspapers, radio, magazines and business publications, motion pictures, labor, business, schools, and many other groups. During the period May 1, 1941, through Apr. 30, 1944, it is conservatively estimated that the War Finance Division received more than \$250,000,000 worth of contributed advertising.

In addition to a comparatively small nation-wide paid staff, thousands of full-time volunteers, and hundreds of thousands of part-time volunteers (mounting to several millions during War Loan campaigns) are actively engaged in selling Treasury securities to the American public.

WAR MANPOWER COMMISSION (WMC) AND U.S. EMPLOYMENT OFFICE (USES). This Commission, which during the first nine months of 1945 placed millions of workers in war production industries and services, was abolished by Executive Order No. 9617 on Sept. 19, and the United States Employment Service began the reverse procedure of finding jobs

for millions of displaced war workers and returning veterans.

The President's Executive Order abolishing WMC at the same time ordered the transfer of the United States Employment Service, which had been the operating arm of WMC, together with certain functions, facilities and personnel of WMC to the Department of Labor. All manpower wartime controls were terminated when Japan surrendered.

In relinquishing his post as Chairman of the War Manpower Commission, Paul V. McNutt credited the USES with rallying the "mightiest labor force of all time from the 135 million American citizens of all races, creeds and walks of life." USES was responsible for more than 35 million war job placements in the four war years, Mr. McNutt said.

After the abolition of WMC, USES turned its attention toward the problem of reconversion employment needs, emphasizing placement and counseling of returning veterans and displaced war plant workers in peacetime jobs.

The peacetime task of assisting industry and the veterans and other job applicants had been anticipated by USES during the war. Counselors were placed at all Army separation centers as well as in a majority of the 1,725 local offices in the 48 States to advise discharged military personnel.

The last six months of 1945 were characterized by the heaviest workload in the history of USES. During this period the number of calls made at USES offices for job placements, job information, job counseling and related services increased from 4,900,000 in July to 10,000,000 during the month of December.

Adding heavily to the workload of USES during the last six months was the responsibility for the registering of a weekly average of 300,000 recipients drawing unemployment compensation during the month of July to 1,800,000 such recipients in December. Similarly the number of veterans receiving Servicemen's Readjustment Allowance who also had to register with USES increased from 39,000 in July to 450,000 in mid-December.

By the end of the year an estimated 3,300,000 veterans of World War II had registered with USES. The monthly number of new applications for jobs from veterans increased from 142,000 in July 1945 to 658,000 in December. The increase was continuous each month as the number of discharges of servicemen and women from the armed forces increased. The number of veterans registered with USES represents approximately 55 per cent of all discharged veterans as of Dec. 31.

Referrals of veterans to employers and placements of veterans in jobs also showed a monthly increase from July on with the exemption of December when suitable job opportunities began to decline. During July referrals of veterans totalled 187,000. In November they were 343,000. In December they dropped to 280,000. Placements of veterans in jobs rose from 87,000 in July to 128,000 in November. In December they were 117,000.

Referrals and placements of veterans and non-veterans combined showed a similar trend during the six months from July to December. In July referrals for both groups totalled 1,640,000, reaching a secondary peak of 1,327,000 in October and dropping to 1,096,000 in November and 815,000 in December. Placements of both groups totalled 1,014,000 in July, declining monthly to 380,000 in December. During the entire year a total of 122,000 disabled veterans were placed in jobs out of a total of 299,855 handicapped veterans who applied for jobs. The first part of the year was characterized

by a "tight" labor market during which USES resorted to intensive inter-regional recruitment of workers to staff war plants. Typical of such recruitment was that for the atom bomb project for which 300,000 workers were recruited.

In general, despite labor shortages during the first half of the year, USES was able to recruit needed manpower for the war effort.

ROBERT C. GOODWIN.

WAR MOBILIZATION AND RECONVERSION, Office of (OWMR). The OWMR was established pursuant to an Act of Congress approved Oct. 3, 1944 (Public Law 458, 78th Congress, Second Session). Director of the Office is John W. Snyder (The White House, East Wing); Deputy Directors: Hans A. Klagsbrunn (The White House, East Wing) and Anthony Hyde (Lafayette Building); General Counsel, Thomas I. Emerson (Lafayette Building); Economic Advisor, Richard M. Bissell; Housing Expediter, Wilson W. Wyatt; Chairman of the Advisory Board, O. Max Gardner.

Congress made OWMR responsible for (1) developing unified programs and establishing policies to adjust the natural and industrial resources and manpower of the United States to war needs and (2) coordinating government planning for reconversion of the same resources and manpower to peace. With respect to its responsibilities for reconversion, the Office was charged with:

- (a) the issuance of orders and regulations necessary to obtain the full coordination of federal agencies;
- (b) the recommendation of appropriate legislation to Congress;
- (c) the promotion and development of demobilization plans and procedures;
- (d) the settlement of controversies between federal agencies in the development of plans and procedures for transition from war to peace;
- (e) the simplification, consolidation or elimination of war agencies as the need for these agencies disappears;
- (f) the determination of the policies for relaxing emergency war controls;
- (g) the consultation and cooperation with State and local governments, industry, labor, agricultural, and other groups, concerning problems of transition from war to peace; and
- (h) the submission of quarterly reports to the President, Senate and House of Representatives covering the progress of these activities.

An Advisory Board, created by the Act establishing OWMR to represent the public interest, consists of:

Public Members—O. Max Gardner, N. C., Chairman; Mrs. Anna M. Rosenberg, N. Y.; Chester Davis, Mo.
 Industry—Eric A. Johnston, Wash.; George H. Mead, O.; Nathaniel Dyke, Jr., Ark.
 Labor—William L. Green, O., AFL; Philip Murray, Pa., CIO; T. C. Cashen, N. Y., Railway Labor Executive Association
 Agriculture—Edward A. O'Neal, Ala., Farm Bureau Federation; James G. Patton, Colo., National Farmers Union; Albert F. Goss, Washington, D. C., National Grange.

OWMR includes the following agencies which exercise their functions under the supervision of the Director:

- (1) Office of Contract Settlement—Robert M. Hinckley, Director, (Federal Reserve Building).
- (2) Surplus Property Administration—W. Stuart Symington, Administrator (Railroad Retirement Building).

The Retraining and Reemployment Administration, established by Title III of the Act creating the OWMR was transferred to the Department of Labor, Sept. 19, 1945.

From the time of its establishment, OWMR coordinated the nation's efforts to produce war requirements and to increase production of critical war items; and supervised the work of agencies developing uniform and orderly procedures for

handling the cancellation of war contracts, prompt settlement of such contracts, and disposal of surplus property. With the defeat of Japan, the agency has become increasingly responsible for government planning for reconversion. Arrangements were made to utilize essential wartime powers to assure the rapid resumption of production of civilian goods. Inventory controls and priorities were used to assure the equitable distribution of scarce materials. A program of adjusting prices to meet the new conditions was inaugurated.

At the same time under OWMR's supervision the work of liquidating the Government's wartime machinery was begun. Wartime government agencies and functions have been abolished rapidly. By the end of 1945, the great majority of wartime controls had been removed: i.e. all rationing controls except over sugar and automobile tires; 90 percent of production and materials controls; 99 percent of transportation controls; 85 percent of export and 75 percent of import controls. Only such controls were retained as were necessary to assist reconversion.

OWMR's major programs at the close of 1945 were directed towards stabilizing prices and obtaining the maximum of industrial production and employment during the transition from war to peace. Under a special program, it also was working to increase construction of housing.

JOHN W. SNYDER.

WAR PRODUCTION BOARD. The War Effort. Up to V-E Day and V-J Day, much was heard about total war and full mobilization. But great as the American war effort was, at no time did it absorb more than two-fifths of the total national output. The civilian economy continued to receive a greater total amount of commodities and services than in such good prewar years as 1937 or 1939.

This was accomplished by superposing war production on the normal production job, instead of by substituting guns for butter. There were some cuts in consumer durable goods. But larger amounts of soft goods and services made up for the denials of new automobiles and electric appliances and aluminum cooking utensils. Throughout the war, the people at home were subjected to inconvenience, rather than sacrifice.

Total output of goods and services rose by something more than 50 per cent, after allowance for price-level changes. (In dollars, before price adjustments, the increase was nearly 125 percent—from \$88.6 billion to \$198.7 billion.) Volume of manufacturing far outpaced the general rise. It was nearly tripled in the five years, as American plants poured out planes and guns, ships and shells, tools and trucks, plus civilian goods in volume. Output of raw materials increased by 60 per cent.

During 1942, new construction volume mounted to more than double the 1939 level. After the most urgently needed war-production facilities had been provided, manpower and materials were concentrated more on current production and less on facilities, so that in 1944, new construction volume was one-third below 1939.

While manpower was being steadily drawn into the armed forces, gross national product was maintained and increased by calling on the housewives of the nation, the youth of school age, the oldsters who had earned retirement, and the physically handicapped to supplement, and in part to replace, those who would normally staff the industries, trade, and services. The labor force increased in five years by such means from 54.1

million to 64.0 million or by almost 20 per cent. Out of the 10 million new workers, plus all but a few hundred thousand of the nine million unemployed of 1939, came the needed manpower and womanpower. These replaced the 10 million added to the military services and added 7.5 million to civilian employment. Most of this addition went into manufacturing plants. Agriculture, and later construction, actually lost workers.

Even the 7.5 million added workers would not have sufficed had they not been willing to work longer and harder than in peacetime. Between 1939 and 1944, the average work week increased from 37.7 to 45.2 hours or by 20 percent in manufacturing, from 32.4 to 39.5 hours in construction, and from 32.3 to 43.9 hours in mining. At the same time productivity—output per manhour—rose sharply. This rise in productivity, apparently in the neighborhood of 25 percent with respect to labor, was responsible for about one-third of the total increase in the production of finished goods between 1939 and 1944, while the rest is attributable to the increased input of productive factors.

Productivity in civilian-type industries seems to have increased slightly, notwithstanding the dilution of the labor force, the use of substitute materials, and the other handicaps under which these industries worked during the war. In the individual munitions industries, the data often show very large increases, e.g. 150 percent for airframes and 120 percent for Liberty ships, over a two-year period.

The wartime expansion of industry's productive capacity was matched by a general improvement of its financial position, as a net result of the course of sales, costs, prices, profits, and reserve accumulations during this period. Sales of the manufacturing industries, including inter-industry sales, rose from about \$58 billion in 1939 to about \$167 billion in 1944. With inter-industry sales eliminated, the resulting series, reflecting value added by industry, rose from about \$25 billion to nearly \$90 billion. The price of industry's most important cost element, an hour of labor, rose by about 50 percent between 1939 and 1944; this, after eliminating the effect of the relatively faster growth of the higher-paying metal industries. Without this adjustment the increase is about 60 percent. Of this total about 10 percent represents the effect of increased overtime premium payments, about 5 percent the occupational shifts within each industry, and about 35 percent the increases in basic hourly wage rates.

Prices of raw materials rose about 60 percent, most of the increase, as in the case of labor costs, occurring between 1940 and 1942. Other costs seem to have been moderate; the cost of at least one important element, electric power, declined substantially.

Prices of civilian-type manufactures rose by about 25 percent, excluding the fact of much quality deterioration in numerous types of finished goods. Munitions prices declined significantly throughout the period, the indices of the War and Navy departments indicating a drop of nearly 25 percent from the beginning of 1942 to the end of 1944. The profits of industry, before taxes, shot up from \$3.7 billion in 1939 to nearly \$17.2 billion in 1944—made possible primarily by the economies of large-scale production, as reflected in the lower input of labor, materials, and overhead charges per unit of output. With the increasing percentage of profits retained in the business, about \$15 billion was added to the net worth of industrial corporations, increasing its prewar level by one-third.

As already noted, the war made little change in civilian buying habits. In 1939, one-tenth of total consumer expenditures was for durable goods; by 1944, war restrictions on durable goods production had cut this by only one-third, largely because production of furniture, repair and maintenance parts, and health and safety supplies was at record levels. The increase in non-durable goods more than compensated for the drop in hard goods. Civilians had almost as much clothing up to 1945, when fabrics fell short; as much food, though not necessarily the kinds preferred; as large a volume of services, and more miscellaneous goods than before the war.

One other far-reaching change in the national economy should be mentioned. To an extent unprecedented in American history, even in previous wars, the business of the nation was guided from Washington. Every industrial plant built in the United States in the war years had to have government authorization. Scarcely a ton of steel or copper or aluminum could be fabricated without government approval. Over large areas of production the decisions as to what should be produced, who should produce it, and to whom it could be sold were government decisions. Prices and wages were controlled by government, and government helped to guide the movement of labor from plant to plant, from industry to industry, and from region to region. Fortunately, the nation never had to impose on itself the degree of regimentation to which its enemies and allies were subjected. But enforcement would have been impossible had not the people accepted with good grace the necessities of war and cooperated to make the system work, confident of prompt return to their traditional liberty of action.

U. S. Munitions Output. Effects of the December, 1944, "Battle of the Bulge" on munitions programs were portentous. Losses of material sustained in the German advance led to intensified action to increase output of critically-needed items. The decline in total munitions output which began at the end of 1943 was strongly reversed in March, 1945.

By April, the imminence of German collapse was manifest, and production began to decline. Cutbacks gained momentum as V-E Day approached and passed, and with the unexpectedly early Japanese surrender, military schedules faded away. By mid-1945, military procurement was below the rate at the time of Pearl Harbor. Total munitions production during the five years of defense preparation and war had amounted to \$186 billion, at standard munitions costs, affording a fairly close measure of actual output.

Included in this total were 86,338 tanks; 297,000 airplanes of 2,481,000,000 pounds airframe weight; 17,400,000 rifles, carbines, and sidearms, 315,000 pieces of field artillery and mortars; 4,200,000 tons of artillery shells; 41,400,000,000 rounds of small arms ammunition; 64,500 landing vessels, 6,500 other Navy ships, and 5,400 cargo ships and transports, besides similarly staggering amounts of other materiel. From July 1, 1940, through July 31, 1945, the United States merchant fleet was quadrupled. Navy firepower increased ten-fold from 1940 on, and by July, 1945, could hurl 4,500 tons of steel at an enemy in 15 seconds. Annual and cumulative production of a large number of individual munitions items showed conclusively the success of the effort to provide the American arsenal for the United Nations.

Reconversion After Victory. When V-E Day arrived, industry's preparations for reconversion already had a head start. These preparations were

gradually accelerated, with continuing WPB assistance, as resources were freed by declining military production.

The policy of the War Production Board toward the control structure for reconversion was clear. It was, first, to get rid of all orders which were no longer needed, and, second, to maintain those controls which were essential to assure an orderly transition to peacetime operation. The Controlled Materials Plan, which was open-ended after V-E Day, went out of existence at the end of September. More than 200 orders and regulations in effect at V-E Day were lifted before V-J Day, and thereafter the pace of revocation was stepped up, so that by November there were no more than a handful left.

The reconversion problem itself involved only a handful of industries, although these were highly important. Blast furnaces were turning out the same pig iron in peace as in war; cotton spindles the same yarn, and the changes in specifications of finished steel or fabric involved nothing in the nature of a wholesale conversion or reconversion. Much the same situation held in lumber products, in foods, in containers, in leather products, in construction machinery, in machine tools and plant equipment, and in most of the rest of the American economy. Reconversion meant primarily a change of customers, and the only serious problems were whether the new customers would buy as much as the old and whether costs could be held in line with prices.

To the automotive and refrigerator and other consumer durable goods industries, and in lesser degree to some of the other metal-working industries, however, the conversion to war had meant tearing apart production and assembly lines in order to tool up for production of guns, shells, aircraft engines and wing assemblies, combat vehicles, and the other paraphernalia of war. In getting back to civilian production, these industries had to reverse the process, and full reconversion really meant volume production of passenger cars, of washing machines and refrigerators and domestic sewing machines, of stoves and electric appliances and metal furniture.

The Spot Authorization Plan helped to absorb some local pools of unemployment, but it was only a limited factor in reconversion because of the tightening in materials and manpower soon after the first authorizations had been issued in the fall of 1944. By spring of 1945, however, the shortages of some types of consumer durable goods had become so great, after three years without new supplies, that WPB was allotting materials for such items as washing machines and refrigerators for the third quarter, despite the fact that V-E Day had not yet officially arrived. But while the V-E Day cutbacks were large, for the most part they affected deliveries scheduled for late summer and autumn. When Japan surrendered, munitions production was down little more than 10 per cent from the spring peak, and only a small fraction of the resources which had been devoted to war had been made available to the civilian economy.

Thus, it was not until after V-J Day, when the cutbacks began to free large amounts of resources that reconversion could pick up momentum. Meanwhile, however, many companies had been saved months in the preparatory phase by virtue of the order permitting manufacture of experimental models; the authorization for reconversion tooling, and the steps taken by WPB to get plant construction started and equipment orders scheduled. Some millions of dollars of tools necessary for resump-

tion of civilian production had already been delivered, and more were far along in production when V-J Day came.

In September, following final victory, and only four months after the end of fighting in Europe, it was too soon to measure the progress of reconversion in terms of shipments of hard goods to civilian customers. But reconversion of plants was going ahead. Inventories of war goods—goods in process, component parts, and materials unusable for civilian production were being cleared from the plants. Special-purpose war tools were being moved out and replaced. Production and assembly lines were being rearranged—and in the tool plants, the finishing touches were being put on the new equipment which would fit into those lines; equipment which could not be built overnight and which had a normal peacetime production cycle running anywhere from a few weeks for jigs and fixtures to as much as a year for the heaviest hydraulic presses. Pipelines were being filled with raw materials and components, and the components factories were going through the same process as the assembly plants.

In industries other than consumer durable goods, reconversion had been much more rapid. Some industries, of course, had to curtail rather than reconvert—aircraft, special ordnance plants, shipyards, for example. But the textile and apparel trades were already turning out civilian goods on the same spindles, looms, and sewing machines that had been making military cloth and uniforms a few short weeks before. The petroleum industry was making gasoline for civilian passenger cars instead of for B-29s. The rubber companies were building tires for civilian trucks and passenger cars in the same plants which had but recently struggled to meet military tire needs.

Termination of WPB. All functions and powers of the War Production Board established by Executive Order No. 9024 of January 16, 1942, and all agencies, officers (other than the Chairman and the other members of the War Production Board), employees, records, property, and funds of the Board, were transferred to a newly appointed Civilian Production Administration as of November 3, 1945, by order of the President. The War Production Board was thereby terminated. Clothed with the residual powers of the War Production Board, the newly created body, headed by John D. Small, Administrator, assumed the functions and duties needed for full peacetime reconversion. Mr. Small was Chief of Staff for the War Production Board when the Board ceased to function.

J. A. KRUG.

WAR REFUGEE BOARD. Terminated by Executive Order on September 15, the War Refugee Board's function ceased with the end of the war in Europe.

On Jan. 22, 1944, President Roosevelt by Executive Order set up the War Refugee Board, consisting of the Secretary of State, the Secretary of the Treasury, and the Secretary of War. They were directed to take action for the immediate rescue from the Nazis of as many as possible of the persecuted minorities of Europe—racial, religious or political—all civilian victims of enemy savagery. The Board was established in the Executive Office of the President. John W. Pehle, Assistant to the Secretary of the Treasury and Director of Foreign Funds Control, was given leave of absence to serve as Executive Director. Resigning to take charge of the Treasury's Procurement and Surplus Property Division, Mr. Pehle was succeeded on January 27 by William O'Dwyer.

As set out in the Executive Order, the Functions of the Board include development of plans and programs and the inauguration of effective measures for (a) the rescue, transportation, maintenance and relief of the victims of enemy oppression, and (b) the establishment of havens of temporary refuge for such victims. The Board was directed to cooperate with all public agencies and with established private organizations dealing with refugee problems.

With the cooperation of neutral countries, the Board participated in the rescue of thousands of refugees from the Balkans across the Black Sea to Palestine; in the rescue of many children and other refugees from Belgium, Holland, and France who were brought to Switzerland and over the Pyrenees to Spain and Portugal; in the rescue of many victims of Nazi persecution in Norway and the Baltics who found sanctuary in Sweden; and in the rescue of thousands from Hungary, Czechoslovakia, and Northern Italy to Switzerland.

Second only in importance to evacuation operations was the Board's psychological warfare work. In this area it has worked hand in hand with the Office of War Information. President Roosevelt's warning of March 24 to Germany and her satellites of the consequences of further persecutions of the Jews was given wide coverage in the press and radio around the world, particularly in German-controlled Europe.

With the termination of the Board's duties the only unsolved problem remained in Oswego, N. Y., where a refugee camp, holding nearly a thousand refugees from Italy, awaited a disposal decision. When the jurisdiction of the camp passed to the Department of the Interior, on June 6, the Board recommended that those refugees who so desired should be permitted to remain in the United States.

In his final summary report to Secretaries of State, Treasury and War, Mr. O'Dwyer stressed the need for immediate United Nations action in finding permanent homes for non-repatriable displaced peoples.

WAR RELIEF CONTROL BOARD. The President's War Relief Control Board was established by Executive Order, July 25, 1942, following recommendations of a committee appointed by the President, at the request of the Secretary of State, as to what steps should be taken to assure the efficient and economical administration of resources for war relief and welfare at home and abroad. Mr. Joseph E. Davies, former Ambassador to Russia, is Chairman, and Charles P. Taft, former Director of the Office of Wartime Economic Affairs of the Department of State, and Mr. Charles Warren, former Assistant Attorney General, are the other members, all serving without compensation.

The Executive Order transferred to the Board the administration of provisions of Section 8 of the Neutrality Act of 1939 relating to the solicitation and collection of funds and contributions for relief purposes in belligerent countries formerly vested in the Secretary of State. All matters within the jurisdiction of the Board relating to the foreign policy of the United States, however, are determined after conference with the Secretary of State.

The Board is authorized to control, in the interest of the furtherance of the war purpose, all solicitations, sales of merchandise or services, collections, receipts, and distribution of funds and contributions for (1) charities for foreign and domestic relief, rehabilitation, reconstruction and welfare arising from war-created needs in the United

States or in foreign countries; (2) refugee relief; (3) relief of the civilian population of the United States affected by enemy action; or (4) relief and welfare of the armed forces of the United States or of their dependents; "Provided, that the powers herein conferred shall apply only to activities concerned directly with war relief and welfare purposes and shall not extend to local charitable activities of a normal and usual character nor in any case to intrastate activities other than those immediately affecting the war effort."

The foregoing provisions do not apply to the American National Red Cross or to established religious bodies which are not independently carrying out any of the activities specified.

The Board is authorized to provide for the registration or licensing of persons or agencies engaged in any of the classes of relief and welfare activities as defined above. The Board also certifies eligible agencies for inclusion in the National War Fund established at its suggestion to conduct a single national appeal for all major war charities with the exception of the American Red Cross.

All registered agencies submit a periodic report to the Board including a statement of finances, the source of all monies received and expenditures for relief, administration, and other related purposes. A summary of these reports is issued quarterly.

The Board transmits to the President reports and recommendations regarding war charities and the relationship of public and private organizations, resources, and programs in these fields.

Relief Statistics. Funds contributed during the year June, 1944, through June 1945 as reported by agencies engaged in foreign relief, registered with the Board, amounted to \$90,423,120.

Contributions in kind of a dollar value of approximately \$182,798,080 were also reported as received. Of this amount approximately \$145,877,752 worth was shipped abroad before June 30, 1945.

As of June 30, 1945, total contributions and disbursements for all foreign relief since September, 1939, when agencies engaged in foreign war relief activities were first registered, are as follows:

	Receipts	Disbursements for Relief
Cash.....	\$253,802,862	\$218,736,798
Contributions in kind	224,409,787	183,863,496
Total.....	478,212,649	402,600,294

It should be understood that the figures above refer only to foreign war relief activities. (Also, the reports of a few agencies were still outstanding at the time these statistics were compiled.) The number of registered agencies engaged in such work as of June 30, 1945, was 90.

There also were 25 registered agencies engaged in domestic welfare on behalf of the Armed Forces and the Merchant Marine. Their total contributions are not available, but approximately 66 million dollars was included in the National War Fund budget for 1945 for these Services.

JOSEPH E. DAVIES

WAR RELOCATION AUTHORITY. (WRA). When on January 2, 1945, the Army revoked its wartime exclusion of persons of Japanese ancestry from the West Coast, the War Relocation Authority announced that it would close its eight relocation centers within a year of the revocation date.

Thus, with its own liquidation, WRA planned to end an epoch for a small American racial seg-

ment of 111,000 people, singled out for unprecedented mass evacuation three years earlier. At the time of revocation only about one-third of those originally evacuated had relocated throughout the country from the temporary barracks camps. This meant that WRA must do in one year double the job it had done in the two previous years.

By November 30, 1945, the last center had closed. About 45,000 evacuees went back to the West Coast from centers. The rest joined the 35,000 who had resettled earlier, principally in the East and Midwest. At the same time, at least 5,000 of these evacuees who had relocated before the ban was lifted returned during 1945 to former West Coast homes.

But returnees did not go back without meeting problems. One such problem was hostility toward their return to the West Coast, whipped up by a small but highly organized and vehement minority. By May and June when substantial numbers of evacuees were returning, opposition took the form of terrorism, particularly in California. Arson, property damage, shootings and threats occurred. Fair-minded individuals and groups condemned this violence through the press, public statements and resolutions. Eventually these publicized protests helped bring the intimidation under control.

A more widespread and far reaching obstacle was the housing shortage on the Pacific seaboard. Some Nisei servicemen's families were admitted to federal public housing projects. But by December 31, 1945, some evacuees were still living in private, non-profit hostels, originally set up as interim shelter. Others were housed in FPWA wartime trailer camps and converted Army barracks. During the last months of the year, WRA devoted most of its energies to correcting this situation. To find permanent homes for approximately 7,000 returnees still in these unsatisfactory quarters, the agency planned extension of closing dates for its field offices in critical areas.

The fifty percent of the evacuees who went back to the Coast returned, as though completing a circle, to almost the level of their pre-war status. But several times in the years following Pearl Harbor, fear and suspicion, even of the 70,000 citizen evacuees, had nearly lost them their American rights altogether. Now at the end of exclusion and of the war, evacuees standing in some localities is considerably improved. Subject of much wartime controversy, America's Japanese gained greater nation-wide understanding as a result of evacuation and relocation. This was due in part to the American public's growing awareness during 1945 of the outstanding record of 22,500 Nisei in the American armed forces, less than half of them from Hawaii.

WRA announced that it would relocate all eligible evacuees from Tule Lake, segregation center in Newell, California by February 1, 1946. During the same period, the Immigration and Naturalization Service of the Department of Justice was processing Tule Lake aliens and citizens who had requested transfer to Japan. During 1945 WRA also administered the Emergency Refugee Shelter in Fort Ontario, Oswego, N. Y. By the end of the year, no final decision had been reached regarding which of its nearly 1,000 European refugees could be returned to their homelands.

WRA's Washington office set June 30, 1945, as its liquidation date, when disposition of property and records was scheduled for completion. Centers were due to dispose of property and records within 90 days of their closing dates.

DILLON S. MYER.

WARM SPRINGS FOUNDATION. Located in Meriwether County, Georgia, the Foundation was started in 1927 by Franklin D. Roosevelt as a non-profit organization for the after-treatment of infantile paralysis.

It is financed primarily by grants from The National Foundation for Infantile Paralysis which conducts the annual March of Dimes. Basil O'Connor is president of the National Foundation and chairman of the executive committee of the Warm Springs Foundation. The center treats from 500 to 600 polio victims each year, always after the disease has passed the acute state. Dr. C. E. Irwin is chief surgeon.

The Foundation trains some 300 doctors, physiotherapists, and nurses annually in special courses for work in hospitals throughout the U.S. during polio epidemics or in after-treatment.

The institution is on Pine Mountain, with grounds covering 500 acres at an altitude of 1,000 to 1,200 feet. Treatment pools are supplied by pure spring water.

The institution has a large medical building, treatment and recreational pools, a school and occupational therapy building, recreation halls, dormitories, infirmary, dining hall, chapel, brace shop, and cottages.

Present capacity is 125 patients, including members of the armed services. They come from every state and age group. Buildings under construction will accommodate 50 more patients and additional staff.

No profit is derived from patients. About two-thirds pay none or only part of the cost of treatment. Others pay actual costs. No one is refused admission for lack of funds.

WATER SUPPLY AND PURIFICATION. Shortage of water supply and increased demand for supply were typical conditions in many cities during 1945, the increased demand and consumption being especially serious where war industries and camps had suddenly increased the population. In the early part of the war there was a movement for interconnection of water systems of neighboring cities as precaution against damage by enemy action or sabotage, but as the tide of war ebbed farther from our shores this factor was eliminated.

In Ohio, several cities suffered severe shortage due to drought, inadequate storage and a long spell of cold weather. The State Water Supply Board recommended drastic regulation to stop contamination of ground water by oil and gas well drilling, and to stop the use of old wells for disposal of sewage. Florida had trouble with encroachment of salt water, even to ten miles inland, due in part to the lowering of the ground water level by drainage of swampy lands. Nevada, Colorado, Arizona and other States, in cooperation with Federal authorities, are to study the underground resources beneath the arid areas as means for irrigation.

Chicago put in partial operation on Sept. 20 its great water treatment plant, long delayed under war conditions, but to be the largest in the world when fully completed. This \$24,000,000 plant, with lake intake, treatment works, filters, pumping station and distribution tunnels, is to serve the South Side district (population 1,350,000), and is located on a solid fill or pier extending into Lake Michigan. At present only chemical treatment (chlorination) is applied, removing 70 per cent of impurities; filtration will follow with the completion of the rapid-sand filters in 1948. A similar project to serve the North Side district has been

approved by the city council. Cleveland, Ohio, has a program of enlargement and improvement and is studying the requirements for a "Greater Cleveland." Columbus is seeking an additional supply from surface or underground sources, and laid a pipeline to the Scioto River as an emergency measure.

As an example of war conditions, Corpus Christi, Texas, had its population increased 253 per cent by industries and a navy base, with resultant increase of 675 per cent in water consumption. For comparable conditions at San Diego, Calif., a 72-mile aqueduct is being built from the Colorado River aqueduct of the Metropolitan Water District of Southern California to the San Vicente reservoir, from which new pipe lines will extend 18 miles to the city. For this project, the city and several other communities organized the San Diego County Water Authority. At Yakima, Wash., the court upheld the city in charging higher water rates for outside consumers, and in its right to discontinue supplying such consumers.

In water treatment, coagulants prepared from sodium silicate are being used for water softening and removal of iron in St. Louis, Chicago and other cities. A new electrolytic softening process is being used by the Metropolitan Water District of Southern California for treatment of the Colorado River water. There is also a new de-ionization process to produce chemically pure water of any desired degree of softness. The largest municipal water softening plant is said to be at Ventura, Calif., supplying a population of 2 million in several communities by a combination of lime, soda-ash and zeolite. In 1945, the U.S. had 665 water softening plants, supplying 900 communities. Domestic plants numbered 450,000. The use of chlorine dioxide for removal of objectionable tastes and odors is expected to increase rapidly, since the war demand for sodium chloride is now reduced.

Great efforts have been made to provide good drinking water for men at the fighting fronts. The apparatus ranges from a 7-lb. outfit carried as a man's equipment to one equivalent to a city supply. The U. S. Navy also has developed emergency and permanent plants for water supply and purification in the South Pacific islands, including Guam, Iwo Jima and Okinawa. A comparatively recent discovery is that fluorine in water tends to cause decay of teeth. Treated potable water has been found to cause corrosion in plumbing; the remedy may be to use glass-lined metal parts or to give such water a special treatment. Changes in filtration and sedimentation may come with the use of high-frequency sound waves by electronic devices. When small iron pipe was unobtainable in China, the U. S. Engineers used bamboo pipe in lengths of 15 to 20 ft. for a 600-ft. distribution line.

An interesting event in the history of American water supply was the purchase in 1945 by the city of Paterson, New Jersey, of the Passaic River water rights owned by the "Society for Establishing Useful Manufactures," organized in 1791. Long litigation over State rights in the flow of the North Platte River was ended in October by a decree of the U. S. Supreme Court, granting to Nebraska the major share and restricting the storage rights of Colorado and Wyoming. The new treaty with Mexico concerning the use of the Rio Grande and Colorado Rivers, which went into effect in November, ends some 20 years of controversy.

In Puerto Rico, a bill passed by the legislature and signed by the Governor creates the Aqueduct and Sewerage Service Department to carry out a

6-year program for new water supply and sewerage works. Among the activities of the Institute of Inter-American Affairs is the construction of rural water supply plants along the Inter-American Highway through Central America. The Provincial Government of Quebec has created a Department of Hydraulic Resources, having control over all developments for water supply and hydro-electric power. In England the continued low record of rainfall has led to serious conditions, which are aggravated to a dangerous extent by stream pollution with sewage and wastes. The Ministry of Health has been asked to start control of this hazard. For the supply of London, the completion of three reservoirs, halted by the war, is planned by the Metropolitan Board of Works, as the reconstruction of bombed areas and the introduction of modern sanitary equipment will lead to increased demands for water. See **AQUEDUCTS, DAMS, SANITATION.**

E. E. RUSSELL TRATMAN.

WATERWAYS, Inland. Inland waterways of the United States have not had any great development in 1945. However, with the dedication of the Kentucky dam and lock on the Tennessee River, by the President on October 10, a navigable channel with minimum depth of 9 ft. and width of 300 ft. was extended from the Ohio to Knoxville, Tenn., 650 miles. This dam, 23 miles from the Ohio, is one item in the Tennessee Valley Authority program for navigation, flood control, and water power. Development and operation of inland navigation are in the hands of three authorities. The channels, turning basins, berths and other navigation facilities are provided and maintained by the War Department (Corps of Engineers, U. S. Army). The wharves, piers, landing stages, warehouses and other commercial facilities are provided mainly by local or municipal authorities, and leased usually on a tonnage basis. The tow boats, tugs, barges and other craft are provided by the operating concerns (federal government and private):

The Louisiana State Board of Public Works is to build a new lock in the west bank of the Mississippi at Empire, La., 65 miles below New Orleans, to connect with the Doulhut Canal and thus with the Gulf coastal waterway west of the river. The lock will be 200 ft. long and 40 ft. wide, with 10 ft. of water on the sills. The Board also proposes a navigable canal along the Red River. A project for a ship canal across New Jersey to the Delaware River is opposed by the State Highway Planning Bureau on account of its intersecting numerous main highways, with consequent interference with passenger and freight traffic. An alternative project is an off-shore barrier or break-water extending from Sandy Hook, 30 miles south and about a mile off-shore, with water 50 ft. deep. The cost would be much less than for the canal.

A proposed barge canal across Florida, with 12 ft. of water and a bottom width of 150 ft., is estimated by the War Department to cost \$55,000,000. Surveys are also being made for widening and deepening the Florida section of the Gulf inter-coastal waterway. In Connecticut, a State Port Survey Commission is making a survey of all navigable waterways in the State.

Modernizing of the Hennepin Canal, built in 1907 to connect the Illinois River with the Mississippi at Rock Island, Ill., would include deepening to 9 ft. of water and reducing the number of locks from thirty-two to six. Widening and deepening of the Chicago Drainage Canal is also proposed. Problems of legality are delaying the transfer of

the old and abandoned Illinois-Michigan Canal from the Federal government to the State of Illinois, for conversion into an expressway. Its route is from Chicago to Peru, Ill., 92 miles. Another project is for a canal from Little Rock, Ark., to the White River and the Mississippi, shortening by 100 miles the distance from Little Rock to Memphis.

Canalization of the Trinity River, in Texas, is being studied by the War Department, which has also approved a 45-mile ship canal from San Francisco Bay to Sacramento, shortening the river route by 15 miles. It is to be 200 to 300 ft. wide, with 30 ft. of water, and will have one lock, at the San Francisco end. A revived project in the State of Washington is for a canal from the Columbia River to Puget Sound and the inland or coastal waterway to Alaska. Old but recurring projects are for canals to connect Lake Superior with Lake Michigan, Lake Michigan with Lake Erie, and Lake Erie with the Ohio River. The first, with a length of only 40 miles, from Au Train to Escanaba, would by-pass the route through the Sault Sainte Marie canal and locks and shorten that route by 360 miles.

Power barges with oil-electric outboard drive are in operation on the New York State canals and the Mississippi, and also on the Rhine. Ice-breaking vessels are being used more extensively to prolong open navigation on the Upper Mississippi and at Sault Sainte Marie and the Straits of Mackinac. The Inland Waterways Corporation (U. S. Department of Commerce), operating 3,000 miles on the Mississippi, Illinois, Missouri, and Warrior rivers, has a fleet of steel freight barges and tank barges and also tug boats of 700 h.p. and 1,320 h.p. These tugs and tow boats are displacing the old and spectacular side-wheel and stern-wheel river steamers. Welded steel barges are being introduced by the Mississippi Valley Barge Line Co.

The long discussed St. Lawrence River project for a great power dam and a lock opening navigation between the Great Lakes and the Atlantic, in cooperation with Canada, is very much alive but still highly controversial as to merits and costs. In October, President Truman urged Congress to ratify the agreement drafted in 1941, but this agreement is considered out of date and unsatisfactory. An American proposition for postwar Europe is free and unregulated navigation of the network of canals and rivers, eliminating the numerous customs offices and other obstacles at national boundaries. This was planned in August at a conference, in London. In England nearly 1,000 power-driven craft are operated on the various canals, and the traffic in 1945 amounted to 12,000,000 tons, exclusive of 7,500,000 tons on the Manchester Ship Canal.

The Albert Canal, in Belgium, futile as a guard against invasion from Germany, was cleared for navigation by the U. S. Engineers, who removed some 200 bridges blown up by the retreating Germans. In November, the International Commission for Control of Rhine Navigation reported that the channel was open from the sea to Basle, Switzerland, all wrecked bridges being removed, and temporary bridges removed or raised for clearance. The Swedish State Railways have put in service an oil-engined, twin-screw car-ferry for postwar service between Malmo, Sweden, and Copenhagen, Denmark, on which route the annual traffic averages 250,000 passengers and 100,000 tons of freight. An interesting Far East project is for a 110-mile ship canal across the Kra peninsula of Siam, to shorten by some 2,000 miles the sea route

between ports of India, China and Japan. See PORTS AND HARBORS.

E. E. RUSSELL TRATMAN.

WAVES. The women's auxiliary of the U.S. Navy. For its organization, see YEAR BOOK for 1942, p. 757. There were 86,000 women serving in the Waves during 1945. Enlistments were discontinued after Japan's surrender, Sept. 1, 1945.

WEATHER BUREAU. A Bureau of the U.S. Department of Commerce, originally organized under the Department of Agriculture in 1890. It operates the basic national (synoptic) system of meteorological observations for the United States and prepares forecasts, summaries, etc. See METEOROLOGY. Chief in 1945: Francis W. Reichelderfer.

WEATHER SYMBOLS. Weather reports are transmitted by teletype by the U.S. Department of Commerce from an intricate network of sub-stations throughout the country. All reports follow a standardized order showing, ceiling, sky conditions, visibility, weather, obstructions to vision, temperature, dew-point, wind direction, velocity, character of gusts, barometric pressure, field conditions and remarks.

Ceiling measurements are obtained by releasing hydrogen-inflated balloons for a pre-determined rise per minute. In the weather charts, ceilings are given in hundreds of feet, either measured or estimated.

In sky condition symbols, plus and minus signs are used, respectively, to indicate dark and thin clouds. Used with elements and obstructions to vision, the plus and minus signs denote intensity. Direction of wind is indicated by arrows. Temperature and dew-point are reported in degrees Fahrenheit. Wind velocity is reported in miles per hour.

WEATHER SYMBOLS

○ Clear	≡ Dense Fog
⊙ Scattered Clouds	≡ Dense Fog In Last Hour
● Broken Clouds	≡ Fog in Patches
● Overcast	++ Drizzle
== Fog over Sea (Coast Stations)	≡ Drizzle and Fog
∞ Haze	• Light Rain
∞ Dust Swirls	⋮ Intermittent Moderate Rain
∞ Distant Lightning	⋮ Moderate Thunderstorm (2-4 hrs.)
∞ Mist	• Moderate Rain
(•) Precipitation within Sight	• Heavy Rain
T Thunder, without Precipitation At the Station	* Light Snow
! Ugly, Threatening Sky	* Intermittent Moderate Snow
⊕ Thunderstorm	* Heavy Snow
∇ Squally Weather	▽ Showers
∇∇ Heavy Squalls Last 3 Hours	▽ Light to Moderate Rain Showers
↑ Signs Tropical Storm Forming	▽ Heavy Rain Showers
⊙ Signs Tropical Storm Has Formed	* Light to Moderate Snow Flurries
≡ Dust or Sand Storms	⊕ Light to Moderate Hail
⊕ Blizzard	⊕ Heavy Thunderstorms (over 4 hrs.)

BEAUFORT SCALE OF WIND FORCES

BEAUFORT NO.	M.P.H.	SYMBOL	DESCRIPTION
0	less than 1		Calm
1	1 to 3		
2	4 to 7	↘	Light
3	8 to 12	↘↘	Gentle
4	13 to 18	↘↘↘	Moderate
5	19 to 24	↘↘↘↘	Fresh
6	25 to 31	↘↘↘↘↘	
7	32 to 38	↘↘↘↘↘↘	Strong
8	39 to 46	↘↘↘↘↘↘↘	
9	47 to 54	↘↘↘↘↘↘↘↘	Gale
10	55 to 63	↘↘↘↘↘↘↘↘↘	
11	64 to 75	↘↘↘↘↘↘↘↘↘↘	Whole Gale
12	above 75	↘↘↘↘↘↘↘↘↘↘↘	Hurricane

PRESSURE TENDENCY

↘ Falling Steadily	↗ Rising Steadily
↘ Falling, Then Steady	↗ Rising, Then Steady
↘ Falling, Then Rising	↗ Rising, Then Falling
↘ Falling Unsteadily	↗ Rising Unsteadily

CLOUD SYMBOLS

— Stratus	⌒ Cirro-Stratus
— Strato-Cumulus	⌒ Cumulus
— Alto-Cumulus	⌒ Cumulo-Nimbus
— Alto-Stratus	⌒ Nimbus
— Cirrus	

Pressure tendency is based on net pressure change, in hundredths of an inch, during the three hours previous to the time of observation.

Invariably, meteorologists use Admiral Beaufort's scale of wind forces, symbolized in arrows which fly with the wind and touch the edge of the circle showing the observation station on the weather map.

The accompanying symbols are those sometimes used.

WHITE HOUSE OFFICE. A division of the Executive Office of the President, which serves the President in the performance of detailed activities incident to his office. The officials include three Secretaries, Matthew J. Connelly, Charles G. Ross, William D. Hassett; Special Counsel, S. I. Rosenman; three Administrative Assistants (personal aides), David K. Niles, Raymond R. Zimmerman, and Richmond B. Keech; Special Assistant, John R. Steelman; Special Executive Assistant, George J. Schoeneman; Social Secretary, Reathel M. Odum; Executive Clerk, William J. Hopkins.

WOMEN'S BUREAU. A bureau in the U. S. Department of Labor created by Congress in 1920 to "formulate standards and policies which shall promote the welfare of wage-earning women, improve their working conditions, increase their efficiency, and advance their opportunities for profitable employment."

As in the immediately preceding years, the Women's Bureau was concerned in 1945 with the most effective utilization of woman power in the nation's war production machine, but even before V-E and V-J Days it had of necessity directed many of its facilities toward the end of furnishing factual and reliable information on which postwar

policies for women workers could be built. An example of this is the current laundry survey. Planned before the coming of peace, this study is expected to yield concrete data which will result in the improvement of wages and general working conditions in an industry in which large numbers of dislocated women war workers will find their postwar employment. Early in the year, the Bureau completed a major field survey in which 13,000 women workers in 11 war-congested areas of the country were interviewed as to their postwar plans, wartime occupations, preferences as to peacetime jobs, and economic responsibilities. Other field surveys finished and on which published reports will be forthcoming dealt with women's jobs in railroad yards; the work of women in the traffic, commercial, and accounting departments of the telephone industry; and the effect on women of wartime alterations in hours of work.

Surveys on which reports were printed during the year were those relating to the employment of women in army supply depots, women's wartime jobs in cane-sugar refineries, and women's emergency farm service on the Pacific Coast.

The special study of union contracts in war plants in the Midwest to ascertain to what extent women members received equal treatment with men as to rate for the job and seniority rights was completed, and leaflets on the subject of rate for the job, seniority principles as they affect union women, as well as on maternity leave in union contracts, were published. A fourth leaflet in the union series, "Unemployment Compensation: How It Works for Working Women," also was printed.

In connection with its program of union cooperation, the Bureau prepared and submitted to the National War Labor Board a detailed brief in support of union request that discrimination against married women workers be abolished.

The consultative and advisory services the Bureau offers to many different organizations and agencies concerned with women workers constituted an extensive part of the Bureau's program during the entire year. Two important conferences were convened for the purpose of developing coordinated programs to safeguard the interests of women workers during the readjustment and post-war periods. At the first, which was attended by women representatives of 25 key national organizations with large woman membership, a "Reconversion Blueprint for Women" was adopted. At the second, in which 31 women labor leaders representing 23 international unions participated, a similar program was agreed upon.

Helping to implement the work of the Bureau headquarters staff were its regional representatives who are stationed in Boston, New York, Philadelphia, Chicago, Detroit, St. Louis, and San Francisco.

Throughout the year the Bureau gave technical assistance to State labor departments concerning standards for labor legislation and minimum wage orders affecting women workers. It was particularly active in advising on matters concerning coverage and standards that would advance both the war and peace effort through the stabilization of women's employment. The Bureau's work in support of the principle of "equal pay," or rate for the job, was intensified, and it acted as a consultant to both the States and Federal government in the drafting of proposed equal pay legislation. To support the electrical workers' union in its stand on equal pay for women, the Bureau submitted a statement to the National War Labor Board pointing out that historically lower pay

standards in jobs traditionally employing women are a serious violation of the principle of equal pay for women.

The Bureau also has continued its research on the status of women under political and civil laws. Bulletins analyzing State labor laws for women were printed and a report evaluating wartime changes in such legislation and incorporating recommendations was completed.

The report being prepared in conjunction with the Social Security Board on the possibility of extending old-age and survivor's insurance to household employees is nearing completion. The Bureau's section of this joint project deals with the need of these workers for such a measure, while that of the Social Security Board presents technical details and administrative methods involved in such coverage.

The Bureau's publications of particular interest to professional and semi-professional women were its series on occupations of women in the medical and other health services. The studies discuss the prewar situation, wartime changes, and future outlook for women in such fields as medicine, dentistry, professional nursing, physical and occupational therapy. They report also on women medical laboratory technicians, X-ray technicians, and medical record librarians.

The bulletin, "Negro Women War Workers," in which material currently available was assembled and analyzed to show the contributions of Negro women to the war effort, was published early in the year.

The division of public information, to which newspapers, magazines, press associations, and special writers turn for authoritative information on matters pertaining to women workers, furnished much factual and interpretative data to such agencies and individuals regarding various aspects of women's employment. Bureau staff members also wrote a number of articles, upon request, for newspapers, magazines, and publications of women's organizations and unions. The division assembled photograph collections for conferences and exhibits of various organizations.

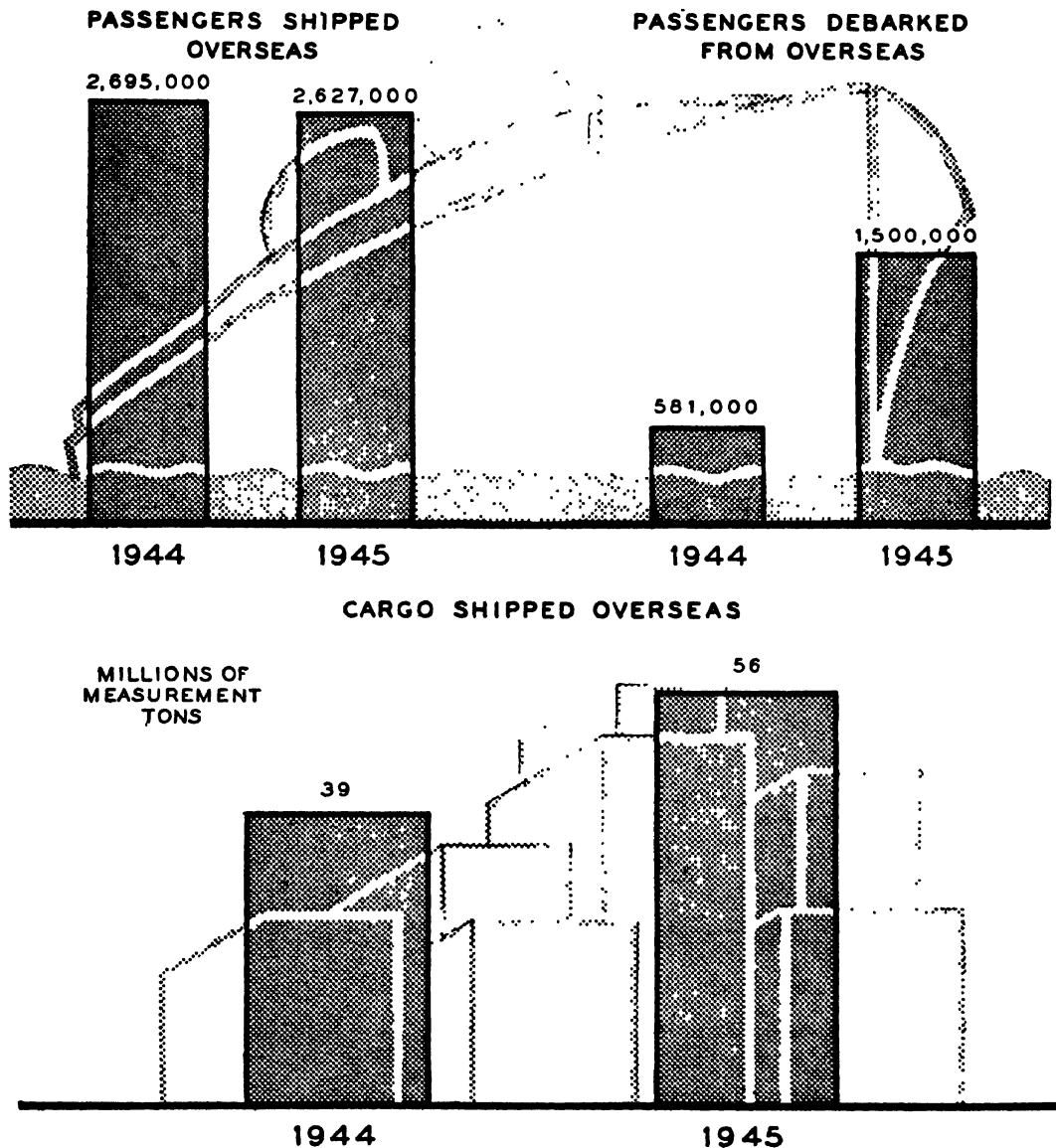
The program of cooperation with other American Republics was continued in 1945. Important among activities in this direction were the series of lectures delivered by the Bureau's Chief of Inter-American Affairs at the Universidad del Trabajo in Montevideo, Uruguay. The lectures concerned labor legislation and other matters affecting women of the United States. While in South America, the Bureau representative also conferred with labor department officials in Uruguay, Peru, and Chile, and in the latter country served as a member of the United States delegation to the first Pan-American Conference on Social Work in Santiago in September.

FRIEDA S. MILLER.

WORK PROJECTS ADMINISTRATION (WPA). A Government agency under the jurisdiction of the Federal Works Agency, now liquidated.

WORLD WAR. Battle of the Atlantic. The struggle between the Allied Nations and Germany for control of the Atlantic, without which the vast armies in Europe, the Mediterranean, and the Middle East could not have been transported and supplied, continued until the end of the war. Only three weeks before the formal capitulation of Germany, a strong group of Nazi submarines was intercepted in mid-Atlantic by a force of carriers and destroyer escorts from the U.S. Atlantic Fleet which sank

OVERSEAS TRANSPORTATION—FISCAL YEARS 1944-45



(From the Report, 1945, of General Brehon Somervell, Commanding General Army Services Forces)

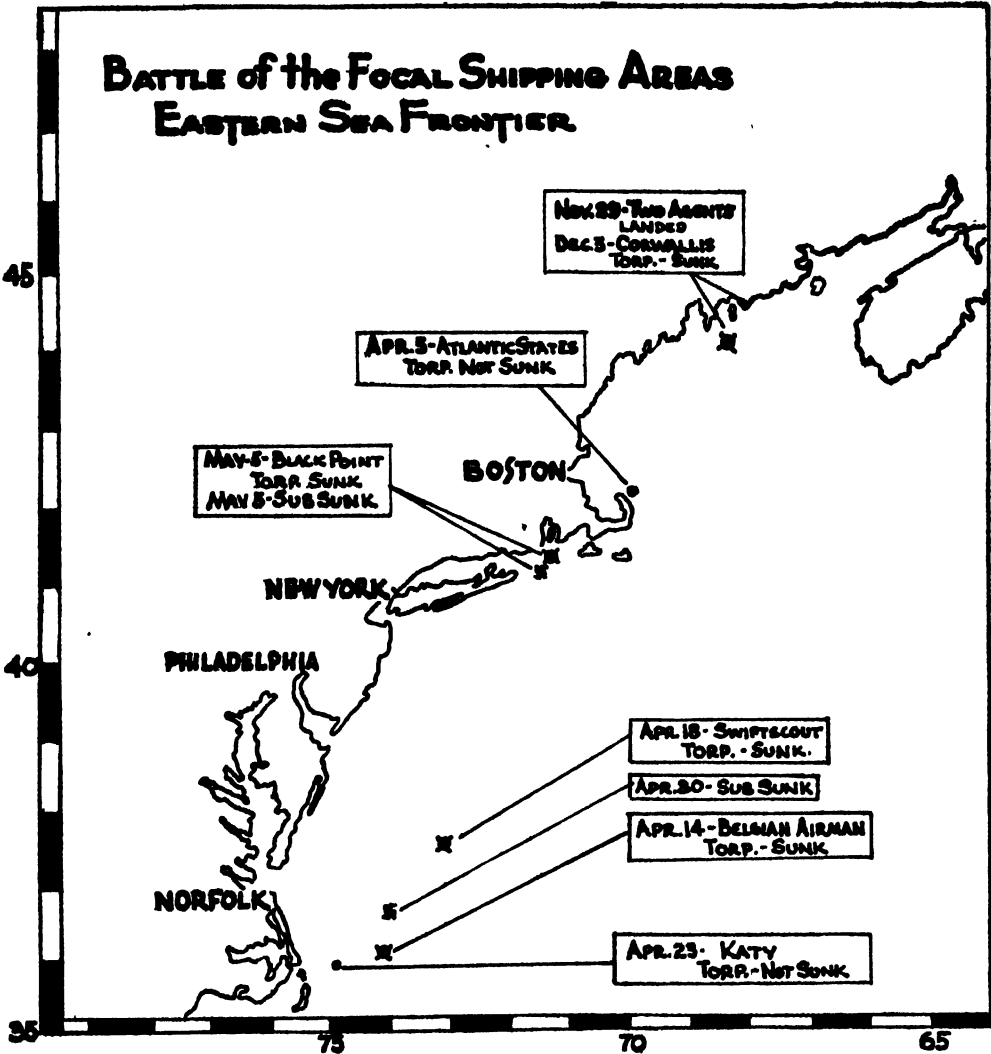
five of the U-Boats. Also, shortly before the surrender, German submarine activity increased along the U. S. East Coast for the first time in more than a year. Just 24 hours before the end a German U-Boat was sunk off Block Island; in April one was sunk south of Nova Scotia; and there was a probable kill off Cape Hatteras only two weeks prior to the surrender. The Germans were successful in torpedoing five merchant vessels off the East Coast in the last three weeks of the war.

In renewing their Atlantic submarine drive the Germans showed the importance they placed upon interfering with the U.S. war effort, and her aid to the other United Nations, at its source.

In the last war, Allied cargo chiefly consisted of Quartermaster supplies; this time Ordnance sup-

plies, including all types of ammunition and weapons, amounted to 34 percent, and QMC and Engineers had 28 and 10 percent of the total respectively. Transportation, Signal, and Air Corps equipment consisted of three percent each, and Chemical Warfare Service one and one-half percent. Both Medical Corps and Army Exchange Service supplies were each less than one percent of the total. Twelve percent of all cargo was comprised of vehicles, and three percent of gasoline and oil.

The Germans had in production at the close of the war a new type of submarine capable of making eighteen knots submerged and a torpedo whose course and depth was controlled by a fine wire attachment. Admiral Jonas H. Ingram, U. S. Navy, Commander in Chief, U. S. Atlantic Fleet, esti-



POINTS OF ACTION IN THE CRUCIAL BATTLE OF THE ATLANTIC

mates that the German U-Boat Fleet reached its peak strength of 450 on March 1, 1945.

Combatting this menace was the United States Navy's Atlantic Fleet, Admiral Jonas H. Ingram, U. S. Navy, Commander in Chief, and units of the British, Canadian, and European navies working under British control.

Fleet Admiral Ernest J. King, U. S. Navy, Commander in Chief U. S. Fleet and Chief of Naval Operations, in his final report to the Secretary of the Navy, gave the following statistics on the Battle of the Atlantic:

In presenting these statistics Admiral King said that the following are clearly the chief features of the Battle of the Atlantic: "(a) Until the closing months of 1942 the German submarines were continuing to reduce the available total of Allied tonnage; (b) Anti-submarine operations resulted in the sinking of an average of 12 German submarines per month after Jan. 1, 1943, or a total of 480 in the two years 1943-44; (c) American shipyards alone produced an average of a million tons per month of new merchant ships after Jan. 1, 1943, or a total of 24,000,000 tons in two years."

Year	German Submarines Sunk	Allied Shipping Sunk	New Construction			Net Gains or Losses
	(Number)	(In thousands of tons)	U. S.	British	Total (In thousands of tons)	
1939 (4 mos.)	9	810	101	231	332	-478
1940	22	4,407	439	780	1,219	-3,188
1941	85	4,398	1,169	815	1,984	-2,414
1942	85	8,245	5,389	1,843	7,182	-1,063
1943	237	8,611	12,384	2,201	14,585	+10,974
1944	241	1,422	11,639	1,710	13,349	+11,927
1945 (4 mos.)	158	458	3,551	283	3,834	+3,376
Totals	782	23,351	34,622	7,668	42,490	+19,144

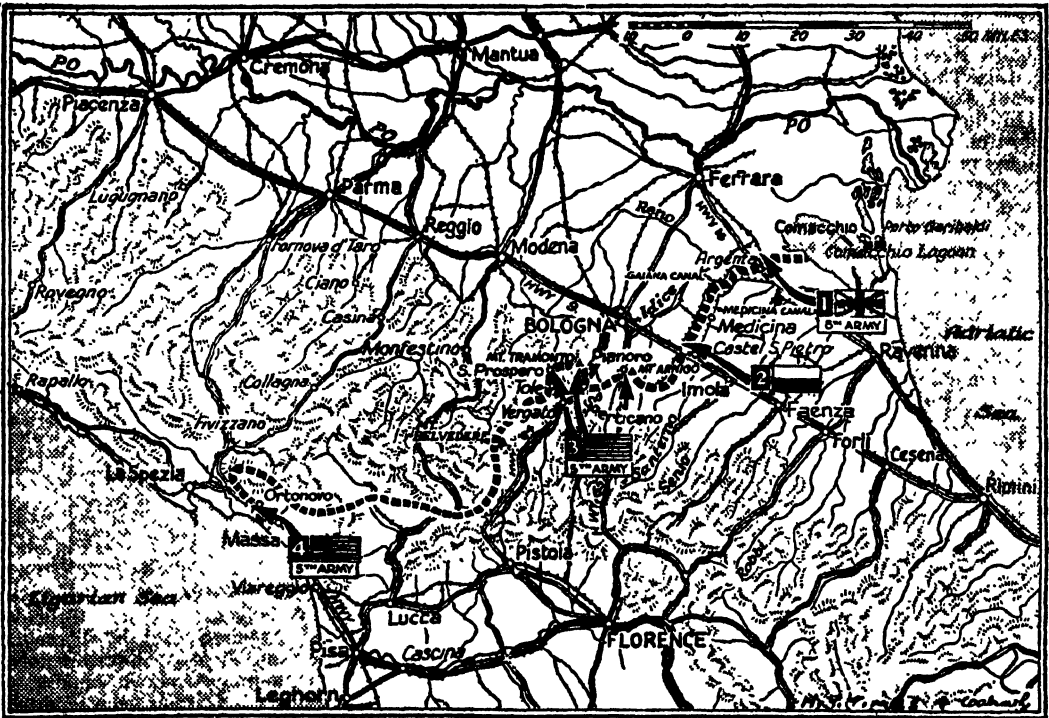
Mediterranean Theater. The Italian front, which forced the first surrender of an Axis member, also brought the first surrender of the German Wehrmacht. The fighting was under the most arduous conditions; except near the very end all gains were against most bitter opposition. Opposing ground forces were very nearly equal, but Allied air power had early won supremacy and was able not only to harass the German troops and their supply lines but also to reach out and pound heavily at strategic oil and rail centers in Austria and southern Germany. The Allied Mediterranean Command was under Field Marshal Sir Harold R. L. G. Alexander, British Army, under whom Lt. Gen. Mark W. Clark, U. S. Army, commanded the 15th Army Group, as the Allied Forces in Italy were designated.

The importance of the Italian campaign lay not

the front was extended to the Reno River on the north. The Canadian troops drove down the Reno River to the neck of land between Lake Comacchio and the Adriatic Sea. Near Faenza, in spite of strong efforts to dislodge them, some German elements remained east of the Senio.

In the Fifth Army sector the Japanese-American 442nd Infantry Regiment spearheaded the fighting around Massa, while the newly arrived 10th U. S. Mountain Division proved the worth of its special training in the fighting around Mount Belvedere.

Aside from patrol activities and raids, the front quieted down considerably until the opening of the Allied spring drive. In the air, however, activity kept apace in spite of bad weather and flying conditions. The Brenner Pass was kept under constant harassment (at one time it was closed to through traffic for 51 consecutive days), while



THE LINE IN ITALY ON APR. 18

(N. Y. Times)

alone in the fact that it kept from Germany thirty divisions she could have employed profitably on either the Western or Eastern Fronts, but also because north Italy and the Po valley contributed considerable of value to the German war effort. The Po valley, ultimate objective of the campaign, is the industrial center and the greatest agricultural region in Italy. Furthermore, through her position in north Italy Germany was able to keep up intermittent contacts with Franco Spain.

The Fifth Army had just regained Barga from which it had been driven on December 26, but had failed to recapture Galliciano which had been lost at the same time. Also failing was an effort to land in the enemy's rear by an amphibious attack near Massa.

The Eighth Army on January 3 opened a new drive in the Ravenna sector against much opposition. The next day the attack was extended southwestward to both sides of Faenza, while on the 5th

other communications and industrial centers beyond the Alps, as far north as Berlin, were pounded. Meanwhile in February the Combined Chiefs of Staff directed that five British and Canadian Divisions be shifted to the European Theater, later modifying this to require the transfer of three to the Western Front, one to the Eastern Mediterranean, and the retention of the other in Italy.

Field Marshal Albert Kesselring, long commander of German forces in Italy, was withdrawn from the Italian front in March and sent to succeed Field Marshal von Rundstedt as Supreme Commander in the West. Replacing Kesselring as Supreme Commander in Italy was Colonel General Heinrich von Vietinghoff-Scheel.

As the spring drive opened the Fifth Army (Lt. Gen. Lucian K. Truscott, Jr., U.S. Army, commanding) held the western two-thirds of the line from a point in the Apennines southeast of Bologna through the mountains to the Ligurian Sea

a few miles south of Massa. The Eighth Army (Lt. Gen. Richard L. McCreery, British Army, Commanding) held the western sector from the junction with the Fifth Army along the Senio River to the Adriatic Sea.

The drive opened on April 9, but preceding it were two preliminary operations. The Eighth Army established a base on a sand spit separating Lake Comacchio from the sea. April 6 it began to clear the area between the Reno River and Lake Comacchio. Meanwhile, on the west coast, the Fifth Army began a diversionary attack in the direction of Massa, gaining some ground north of Viareggio.

The main drive was opened with an attack by the Eighth Army across the Senio River west of Ravenna. Preceding the attacking ground troops, the Fifteenth Army Air Force "carpet-bombed," dropping 1,692 tons of fragmentation bombs, after which flame-throwing tanks seared the opposing banks of the Senio. The river crossing was completed during the night, following which the Eighth directed the force of its attack towards Budrio. Throughout these operations the German Tenth Army offered determined opposition.

In the west the Fifth Army opened its main effort on the 14th, following a vigorous air and artillery preparation. Massa, 17 miles southeast of the port of Spezia, was taken as was Vergato toward the center of the line. On April 20 the Fifth Army, coming out of the Apennines, debouched into the plains of the Po, and severed the Bologna-Modena Road west of Bologna. On April 21 Fifth Army troops entered Bologna from the West and South while Polish forces from the Eighth Army came in from the East.

With the fall of Bologna, the Fifth Army out of the mountains and maneuvering with lightning speed over the flat-lands of the Po Valley, and the Eighth Army having made a daring break-through at the strongly defended gap between Argenta and the Comacchio Lagoon, the position of the Germans was desperate and their retreat began to show signs of disorganization.

Losing no time, Fifth Army elements moved rapidly up the highway northwest to Piacenza while others went north to establish a bridgehead near Ostiglia. The Eighth Army crossed the Po in force on the 25th and, with the Fifth Army troops at Ostiglia, closed the pincers at Finale.

In the west, the 92nd Infantry Division of the Fifth Army reached Genoa. The naval base at La Spezia had fallen the day before.

An armored column was rushed to Como and the Swiss border to prevent the withdrawal of the German forces in the Maritime Alps.

On April 30 from the headquarters of General Clark's Fifteenth Army Group the following historic announcement was made:

"Troops of the Fifteenth Army Group have so smashed German armies in Italy that they have been virtually eliminated as a military force. This destruction has all been accomplished in an offensive which is now twenty-two days old for the Eighth Army and fifteen days old for the major part of the Fifth Army.

"Twenty-five German divisions, some of the best in Germany, have been torn to pieces and can no longer effectively resist our armies. Thousands of vehicles and tremendous quantities of arms and equipment and over 120,000 prisoners have been captured and many more are being corraled.

"The military power of Germany in Italy has practically ceased, even though scattered fighting may continue as remnants of German armies are mopped up."

The U. S. Fifth Army and the Seventh (on the Western front) made contact in the Brenner Pass. Other elements of the Fifth pressed beyond Savona and joined with the French near Noli on the Italian Riviera. Completing the Allied chain, the Eighth Army, moving on Trieste, joined Yugoslav partisan forces at Monfalcone.

Any hopes the Germans may have had that a conditional surrender could be negotiated (they had sought terms as early as February, 1945), now being destroyed, German agents in Switzerland sent word of the readiness of the high command to discuss capitulation. An Allied plane brought representatives to Field Marshal Alexander's headquarters at Caserta where on April 29 an "Act of Surrender" was signed by emissaries of the Waffen SS and the German Wehrmacht capitulating all forces of the German Army Group Southwest in Italy and Yugoslavia.

Under this surrender hostilities ceased at high noon, Greenwich time, May 2, 1945.

Previously, Italian partisans had captured Benito Mussolini and his mistress, Clara Petacci. With Achille Starace, former leader of the Blackshirt Militia, he was summarily tried as a traitor. On April 28 they were executed by a firing squad. Their bodies were taken to Milan and hung by the heels in the Piazza Loreto.

In announcing, April 24, that the Canadian First Army Corps had been moved from Field Marshal Alexander's command in Italy to join the Canadian First Army in northwest Europe, the British Information Services stated that "so far as is known" the following field formations were in action in Italy:

1. British	1st Armored Division
British	6th Armored Division
South African	6th Armored Division
British	1st Infantry Division
British	4th Infantry Division
British	5th Infantry Division
British	46th Infantry Division
British	56th Infantry Division
British	78th Infantry Division
New Zealand	2nd Infantry Division
Indian	4th Infantry Division
Indian	8th Infantry Division
Indian	10th Infantry Division

"In addition to these divisions there are three brigades: the Guards Brigade, the Irish Brigade and the 23rd British Armored Brigade. These in strength amount to one division approximately. The total formations mentioned above amount to 14 divisions, or possibly 13, as it has been reported unofficially that the 4th Indian Division is now serving in the eastern Mediterranean."

2. United States	1st Armored Division
United States	34th Infantry Division
United States	85th Infantry Division
United States	88th Infantry Division
United States	422nd Infantry Division
United States	91st Infantry Division

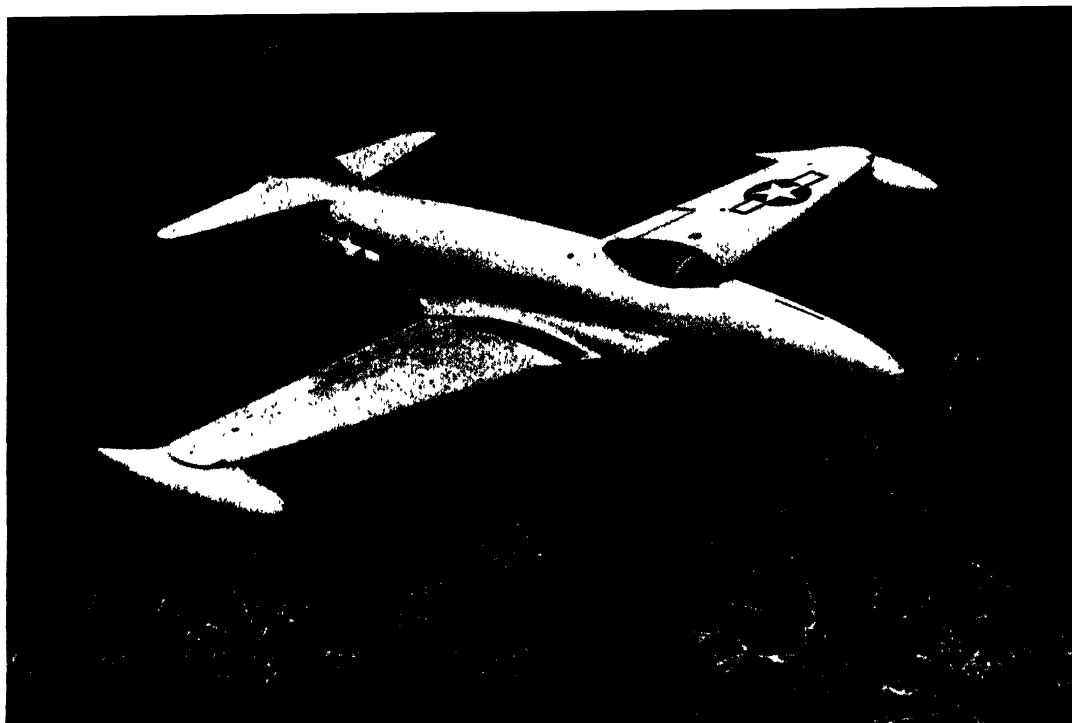
"Also one Mountain Division (since identified as the U. S. 10th Mountain Division) is reported unofficially to be in action in the Apennines. These amount to a total of seven Divisions."

8. Polish	2 Infantry Divisions
4. Brazilian	1 Infantry Division

"In addition French and Greek and a considerable Italian force have been fighting for the Allies.

"The British Eighth Army is composed of divisions from the British Isles, British Dominions, Poland and India. British, Dominion, and Indian Divisions have also been serving with the United States Fifth Army."

During the drive in April, the Mediterranean Al-



THE "SHOOTING STAR"

The Army's jet-propelled P-80 superfighter. In January, 1946, one of these broke all speed records from the Coast, at times travelling 700 miles an hour.

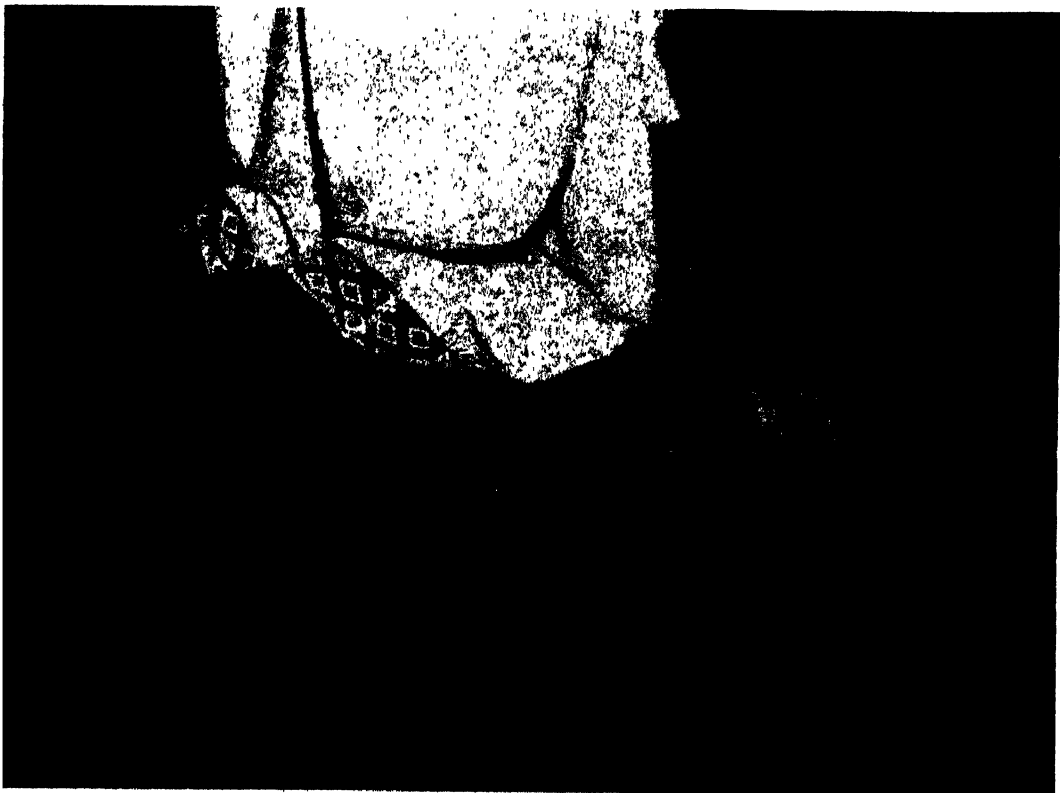


THE JB-2 IN FLIGHT

(Air Task Service Command)



THE G.I.'S DUTY OF OVER-AWING A BUNCH OF PRISONERS



DOES NOT PREVENT HIS EXPERIENCING AWE AND REVERENCE

(U. S. Signal Corps)

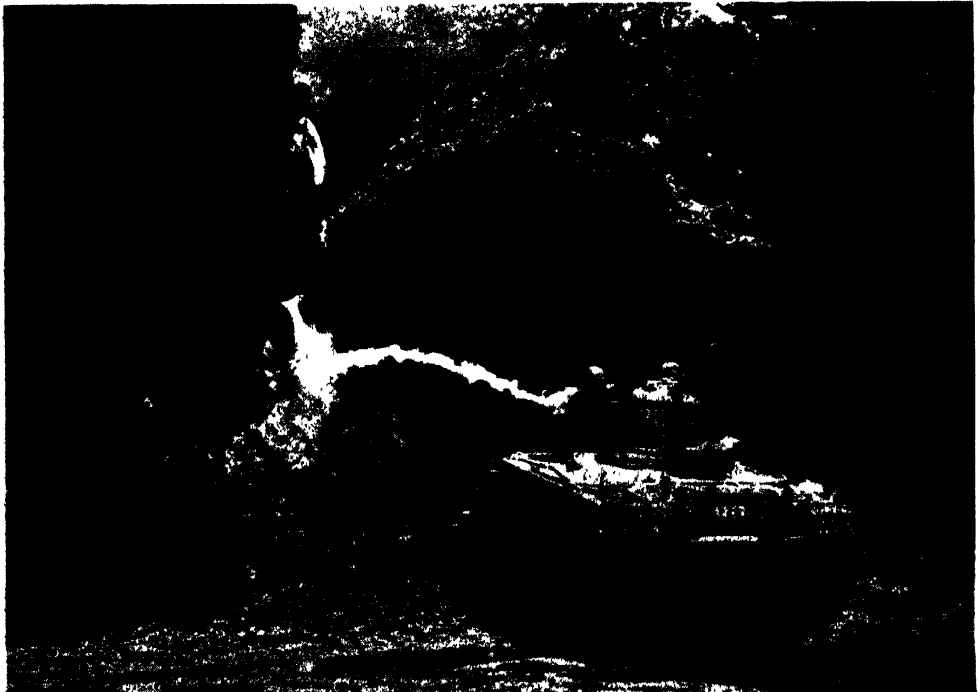


THE "BIG THREE" AT YALTA

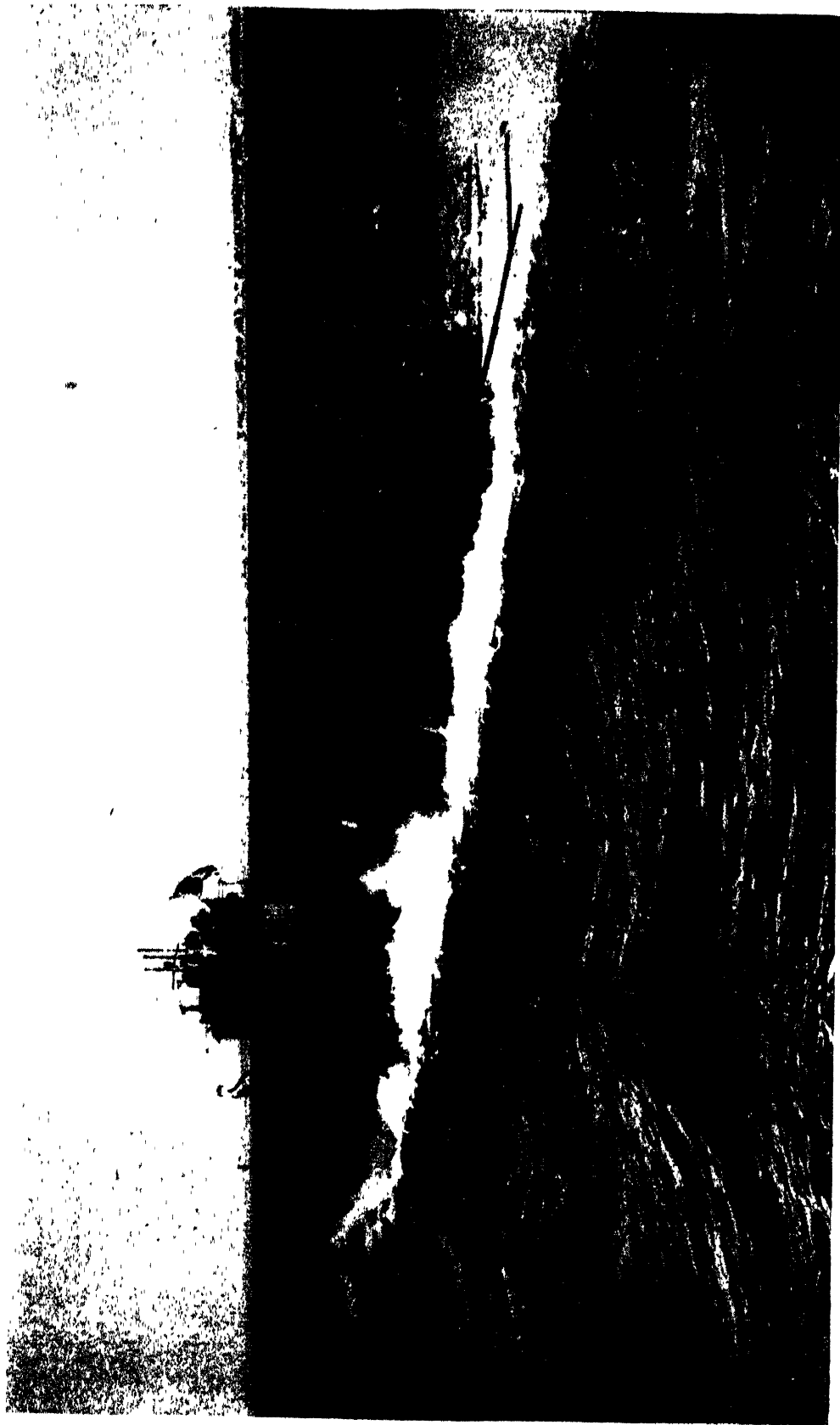
Prime Minister Winston Churchill, President Franklin Delano Roosevelt and Marshal Joseph Stalin conferring on World Problems at the Crimea meeting, February, 1945. (See article on Union of Soviet Republics.) (U. S. Signal Corps)



AN AMERICAN "GENERAL PERSHING" TANK (M26) IN ACTION



A FLAME-THROWING SHERMAN TANK MOPS UP A JAPANESE CAVE ON OKINAWA



ONE OF THE NEW U. S. NAVY SUBMARINES THAT HARRIED JAPAN'S FLEET

There were 244, which sank 276 Japanese warships, 76 being major ones, and two-thirds of their merchant shipping. (Official U.S. Navy)



**A JAPANESE ARMY TRANSPORT LIEUTENANT GUIDES A MARINE BOMBER TO THE LONG-BOUGHT HEADQUARTERS OF THE 100TH JAPANESE ARMY
DIVISION IN THE TOKYO AREA, AUGUST 10, 1945**

This officer, a Military Academy graduate, after living a hunted animal existence on Mindanao, volunteered for the mission. He is giving directions via an interpreter over the intercom. (Official USMC)



LSMs RAIN ROCKETS ON POKISHI SHIMA, NEAR OKINAWA, 5 DAYS BEFORE INVASION
(Official U. S. Navy)



THE JOYS OF FUELLING AT SEA

The Navy's improved technic of fueling at sea was an important factor in the Fleet's enormously increased range which added so much to our sea power in the Pacific War. (Official U. S. Navy)



THE 16-INCH GUNS OF AN IOWA CLASS BATTLESHIP SPEAK

(Official U. S. Navy)



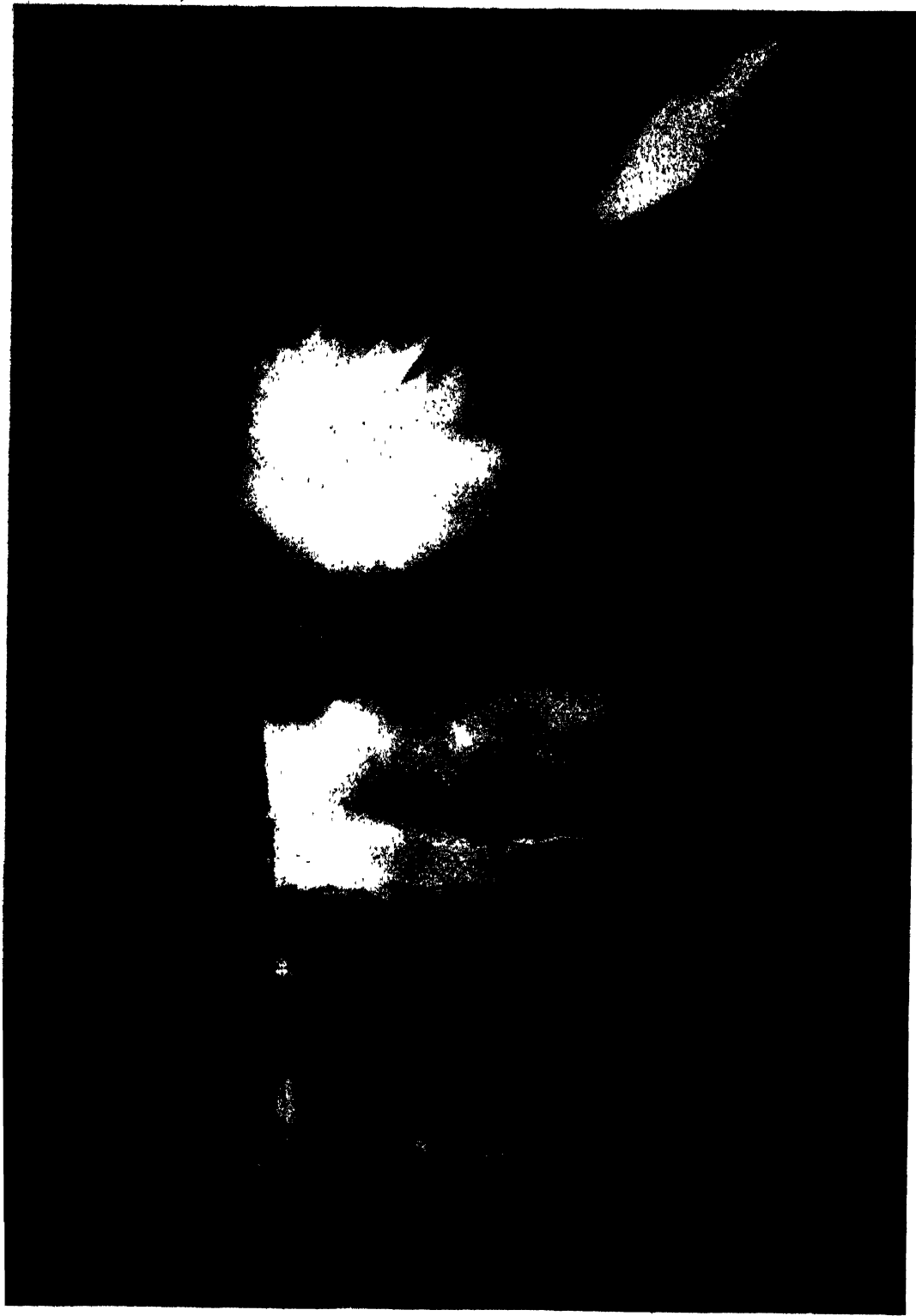
MARINES CHARGING A REINFORCED CONCRETE PILL-BOX ON TARAWA

Capturing these endless individual pill-boxes caused some of the grimmest, most costly fighting of the War. (Official U. S. Navy)



A COAST GUARDSMAN CLEARS A FENDER IN A SOUTH PACIFIC TYPHOON

(Official Coast Guard)



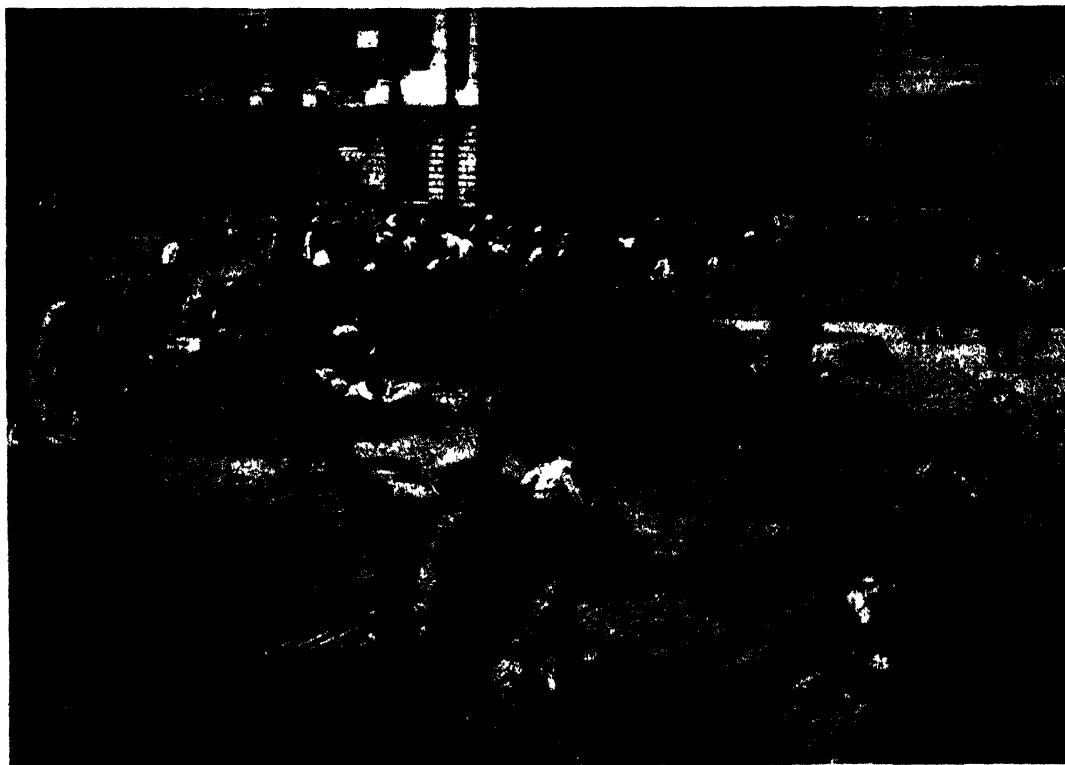
U. S. DESTROYERS TURN LOOSE ON AN ENEMY LANDING FORCE

Speed and maneuverability cut down by engine damage, the warship in foreground hurls anti-aircraft fire at Japanese bombers overhead protecting the attempt to land on Vella Lavella, Central Solomons. (Official U. S. Navy)



A HOT SPOT AT ARNHEM

American paratroopers dash to the assault Sept. 10, 1944, amid bursting German 88's.



SURPRISE INTERRUPTION WHEN PARIS CELEBRATED

Crowds welcoming the entry of Allied troops, Aug. 26, 1944, tried to take refuge as a sniper suddenly opened fire from a building on the Place de la Concorde. (U. S. Signal Corps)



MARINES LANDING ON A PACIFIC ISLAND

Going ashore from an L.S.T. at Cape Gloucester, Dec. 26, 1941. (Official U. S. Navy)

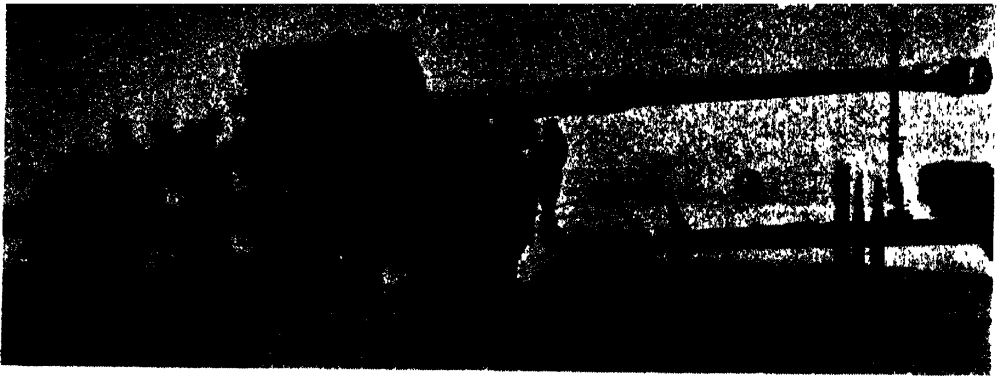


GERMAN WIND GUN, FIRING A "PLUG-OF-AIR" AT AIRCRAFT

It broke one-inch boards at 200 yards, but failed at normal range on planes.



GERMAN GUN THAT HURLED 545 LB. PROJECTILE 53 MILES



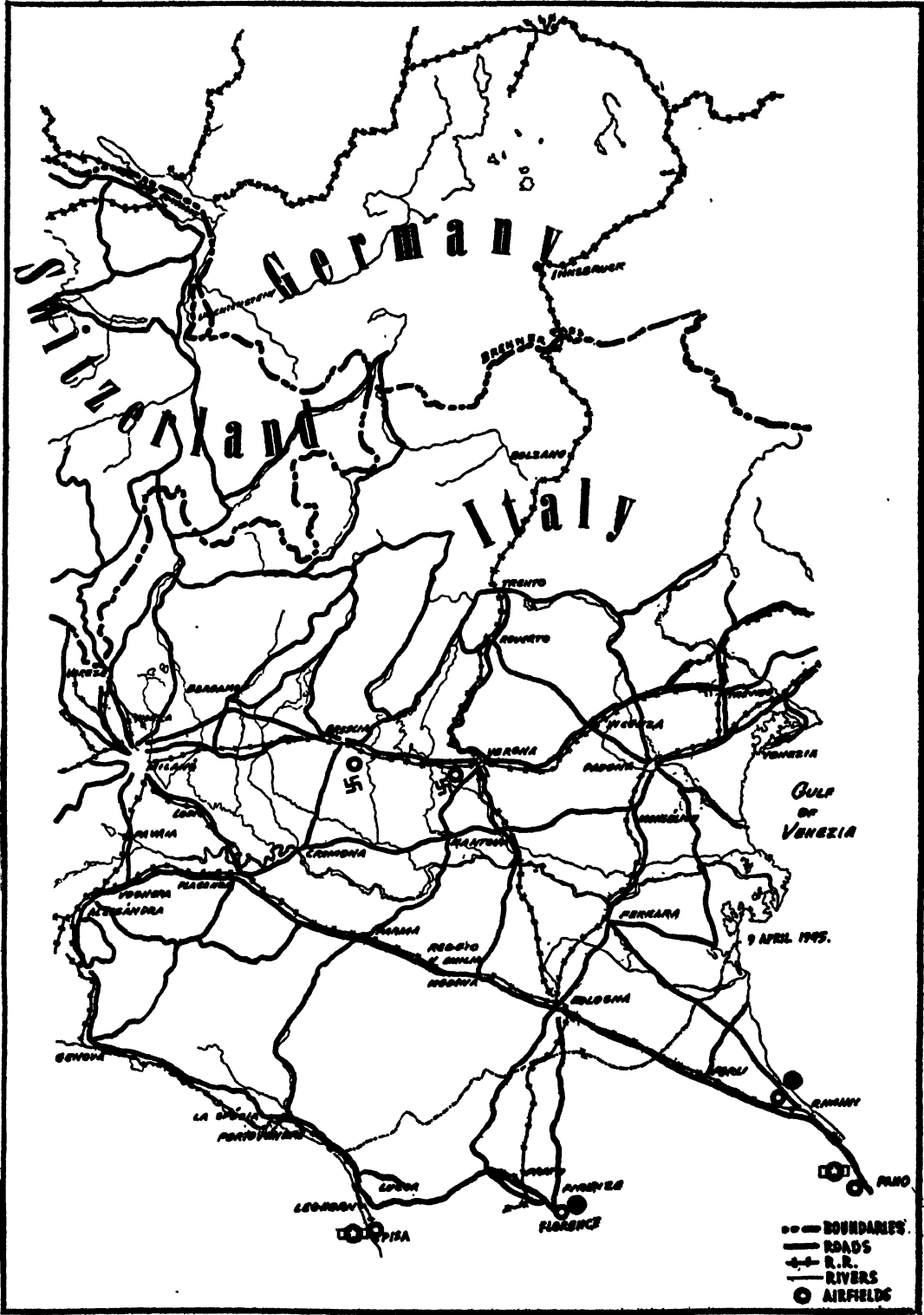
THE MOST POWERFUL GERMAN ANTI-TANK GUN

Gun Pak, 8.8 cm, barrel 19 feet 7 inches, with torsion bar suspension giving easy ride over worst roads.



THE GERMAN GUN THAT SHOT AROUND CORNERS

Designed to protect the "blind spots" of tanks against foot-soldier attacks, it worked. (U. S. Signal Corps)



NORTH ITALY AND THE PASSES INTO GERMANY

(Army & Navy Journal)

lied Air Forces made great and effective use of its overwhelming air superiority. In "Operation Plaster" it paved the way for, and continued co-operation with the ground forces for the elimination of German forces from Italy. In this operation

Operations, as of May 2, 1945, was reported by General of the Army George S. Marshall, U. S. A., as follows (Allies of U. S. are not shown below Army level, except to show U. S. division under their operational control):

Unit	Commander	Location
Fifteenth Army Group	Gen. Mark W. Clark	Florence, Italy.
Fifth Army	Lt. Gen. Lucian K. Truscott	Verona, Italy.
II Corps	Lt. Gen. Geoffrey Keyes	Italy.
10th Mountain Division	Maj. Gen. George P. Hays	Italy.
85th Infantry Division	Maj. Gen. John B. Coulter	Italy.
88th Infantry Division	Maj. Gen. Paul W. Kendall	Italy.
IV Corps	Maj. Gen. Willis D. Crittenden	Italy.
1st Armored Division	Maj. Gen. Vernon E. Prichard	Italy.
84th Infantry Division	Maj. Gen. Charles L. Bolte	Italy.
92d Infantry Division	Maj. Gen. Edward M. Almond	Italy.
British Eighth Army	Lt. Gen. Sir R. L. McCrery	Italy.
91st Infantry Division	Maj. Gen. William G. Livesey	Italy.
U. S. Army Air Forces in MTO	Lt. Gen. J. K. Cannon	Caserta, Italy.
Twelfth Air Force	Maj. Gen. B. W. Chidlaw	Florence, Italy.
XXII Tactical Air Command	Brig. Gen. T. C. Daroy	Italy.
Fifteenth Air Force	Maj. Gen. N. F. Twining	Bari, Italy.
XV Fighter Command	Brig. Gen. D. C. Strother	Italy.

the Mediterranean Allied Tactical Air Force and the Strategic Air Force combined to bomb targets in advance of and in cooperation with the First and Eighth Armies.

When Germany surrendered, official statistics for operations in April were made public showing that the Mediterranean Tactical Air Force flew 38,787 sorties, the largest number since May, 1944, and dropped 21,613 tons of bombs. A total of 4,201 armored vehicles and motor transport was destroyed. A total of 400 armored vehicles and motor transport was damaged. Seventy-four bridges were destroyed, 142 damaged. A total of 1,644 horse-drawn and ox-drawn vehicles was destroyed and 2,212 damaged. Twenty-three locomotives were destroyed and 264 damaged. Six hundred and seventy-five rail cars were destroyed and 2,057 damaged.

The 12th AAF flew 17,565 sorties and dropped more than 13,000 tons of bombs.

The 15th AAF's bombers in April flew 12,962 sorties, dropping 27,432 tons of bombs. The 15th's fighters flew 9,849 sorties and dropped 1,510 tons of bombs.

RAF strategic bombers played a big part in the combined land-air victory on the night of April 9, bombing German troop concentrations only 2,000 yards ahead of the 8th Army line in the closest night attack ever made by heavy bombers.

At the beginning of the month, the Strategic Air Force bombed enemy rail communications in Northern Italy, Austria, Yugoslavia and Southern Germany. In the first few days the bombers attacked rail targets in front of the Russian armies advancing on Vienna.

On April 15, the 15th made history by putting 93 percent of its operational aircraft into the air to bomb targets on the 5th Army front south of Bologna, in an aerial prelude to the advances of the ground forces. Approximately 1,200 bombers, the greatest number of heavies ever dispatched in the Mediterranean Theater of Operations, followed intricate ground markings to bomb enemy concentrations with excellent results.

The Balkan Air Force, flying some 4,000 offensive sorties, softened up defenses preparatory to the ground forces clearing the Germans from the Dalmatian islands of Pag, Rab, Krk, Lussi and Cherso.

Operations of Coastal Air Force also were dovetailed into the general pattern, and were directed against shipping on the east and west coasts of Italy as well as in cooperation with land offensives in Italy and Yugoslavia.

The Order of Battle, Mediterranean Theater of

Casualty figures for other nations had not yet been broken down by areas, but United States losses were reported for the Mediterranean Theater of Operations as follows:

U. S. Army—41,846 killed, 106,886 wounded, 1,828 missing, 470 prisoners, total 151,030 (reported October 31, 1945).

U. S. Navy—1,930 dead, 78 missing, 1,689 wounded, total 8,697 (reported May 8, 1945).

U. S. Marine Corps—2 dead (reported May 8, 1945).

Eastern European Front. The battle line between Germany and her satellite nations on one side and the Soviet Union on the other not only was the oldest land battle line in the war but also by far the longest and with the most troops engaged on both sides.

The Red Army employed on this great front eight armies deployed from north to south as follows (while the term "armies" is generally used in this country in designating these huge military organizations, which the Russians themselves call "fronts," actually they more closely resemble "army groups"):

The First Baltic Army (Colonel General Ivan C. Bagramian) opposite the beachhead in Latvia which was held by 30 divisions of the Sixteenth and Eighteenth German Armies.

The Third White Russian Army, under Col. Gen. Ivan D. Chernyakovsky, east of East Prussia.

The Second White Russian Army, commanded by Marshal Konstantin K. Rokossovsky, and comprising 25 infantry and 5 armored divisions, southeast of Danzig.

The First White Russian Army, under Marshal Gregory K. Zhukov, with about 40 infantry and 5 armored divisions, advancing westward toward Berlin from the Warsaw area.

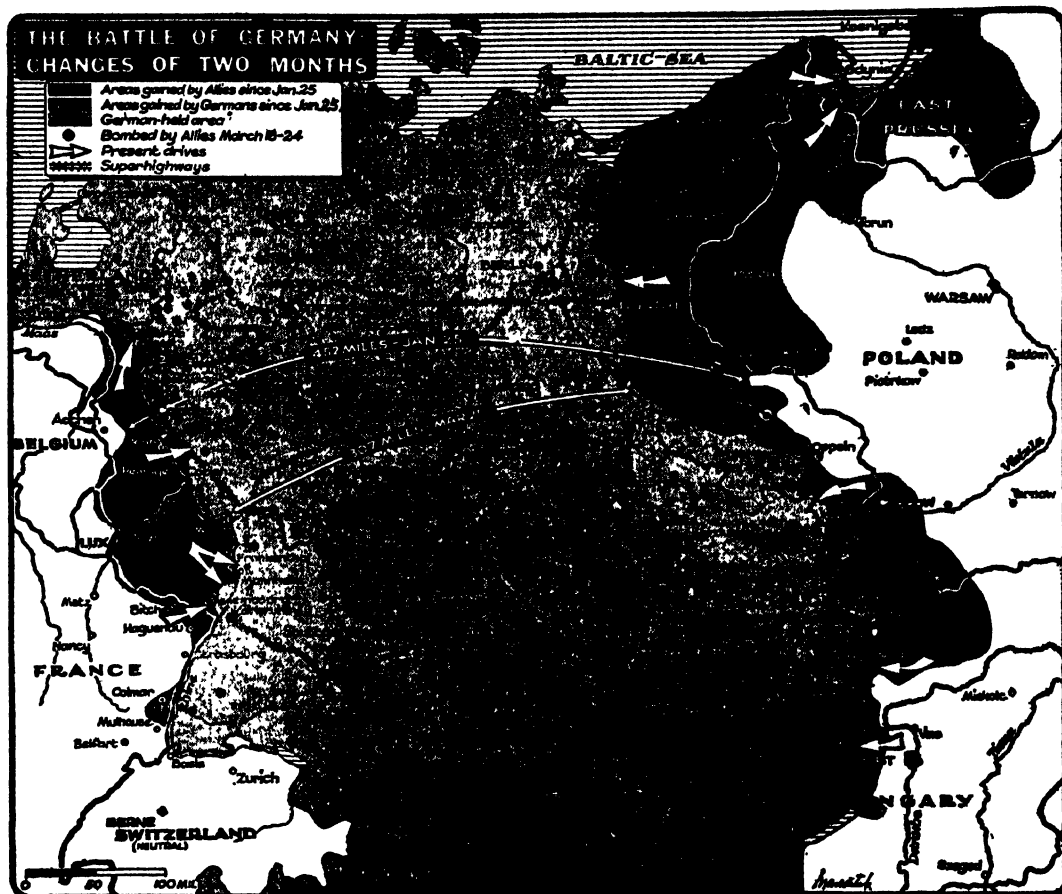
The First Ukrainian Army, commanded by Marshal Ivan S. Konev, north and west of Cracow, with 90 infantry and 15 armored divisions.

The Fourth Ukrainian Army, commanded by Marshal Ivan Y. Petrov, in the Carpathians in the region of the Wistoka River.

The Second Ukrainian Army, under Marshal Rodio Y. Malinovsky, east of the Danube between Budapest and Kassa.

The Third Ukrainian Army (General Fedor Tolbukhin) west of the Danube and north of Drava.

The German strength on this front was estimated at 200 divisions with a total of nearly 2,000,000 men. No official reports or estimates have been made public as to the strength of the Red Army but it is generally considered to have been appreciably larger and better equipped. German estimates placed Russian line strength at more than 340 divisions.



TWO MONTHS' ADVANCE INTO GERMANY, JAN. 25 TO MAR. 24

(N. Y. Times)

The great offensive of the Red Army north of the Carpathians began January 12 with its main power thrust westward through Poland directly toward Berlin. The Russians were careful, however, not to let this thrust advance too far without also moving forward her armies along the Baltic and in Czechoslovakia, Hungary, and Austria.

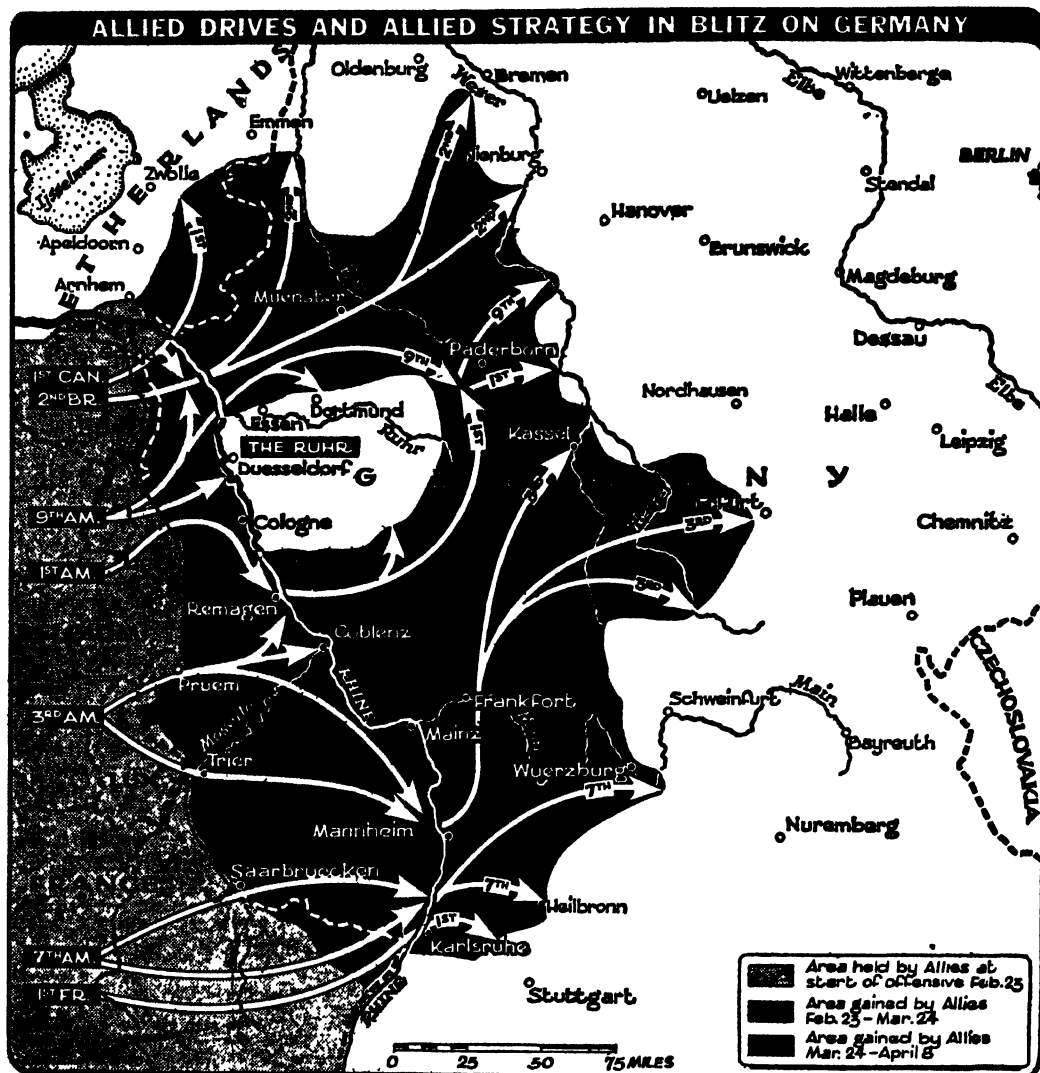
Opening the drive was the First Ukrainian Army which attacked between Sandomierz and Baranow in the wake of a terrific artillery preparation. Two days later, on the 14th, the First White Russian Army, which was to be the center of the main effort, and the Second White Russian Army began their western movement. The following day the front was again widened with the Third White Russian, in the north, and the Fourth Ukrainian Army, in the south, joining the action. Next into action went the Second and Third Ukrainian Armies, the former moving against the southern portion of Slovakia and the latter from the area between Budapest and Lake Balaton. At the same time the First Baltic Army again applied pressure to the Latvian beachhead. With all these Armies in action the line was approximately 560 miles long from north to south.

The action in January was fast and positive. Warsaw fell on January 17 to the First White Russian Army with which the Army of the Lublin Poles was operating. The next day the Second White Russian Army took Modlin, the fortress northwest of Warsaw. The First Ukrainian Army

captured Cracow and for this victory, plus the captures of Lodz, Praszka, Tarnow, and Leczyka, Premier Stalin on January 19 issued five orders of the day. On the 22nd Tannenberg, site of Russia's crushing defeat in World War I, fell to Marshal Rokossovsky's Second White Russian Army. On January 26 Stalin announced that the Red Army had reached the coast on Danzig Bay northeast of Elbing, thus encircling the German troops in East Prussia. While this resulted in isolating the East Prussia garrison from Germany, it still required a considerable Russian force to contain them.

Prior to the drive the Germans had withdrawn some of their forces in the Vistula region of Poland, but had maintained full strength in East Prussia and Latvia on the north flank and in Slovakia on the south. The result was that by the end of January the powerful Russian center drove 280 miles toward Berlin while the flanks had not made such great progress, so that the front that once had been a comparatively straight line was now a pyramid with the flattened apex spreading about 50 miles along the Oder River from Kuestrin to Frankfurt-on-the-Oder. The south side of the line ran sharply back to Cracow while the north side ran equally sharp back to Koenigsberg.

In February the Red Army sought vigorously to lengthen the straight portion of the front opposite Berlin so that it would run from Stettin at the mouth of the Oder River in Pomerania south along



THE ALLIED DRIVES FROM FEB. 23 TO APRIL 8

(N. Y. Times)

the Oder and the Neisse Rivers to about Goerlitz in Silesia on the edge of the Sudetic Mountains. With such a line the Russians felt they would be in a strong position for the final push on Berlin. In this she was not fully successful in February. In the north her line worked up to from 30 to 50 miles from the Baltic Coast while in the south the Neisse River was reached in some places, but not crossed.

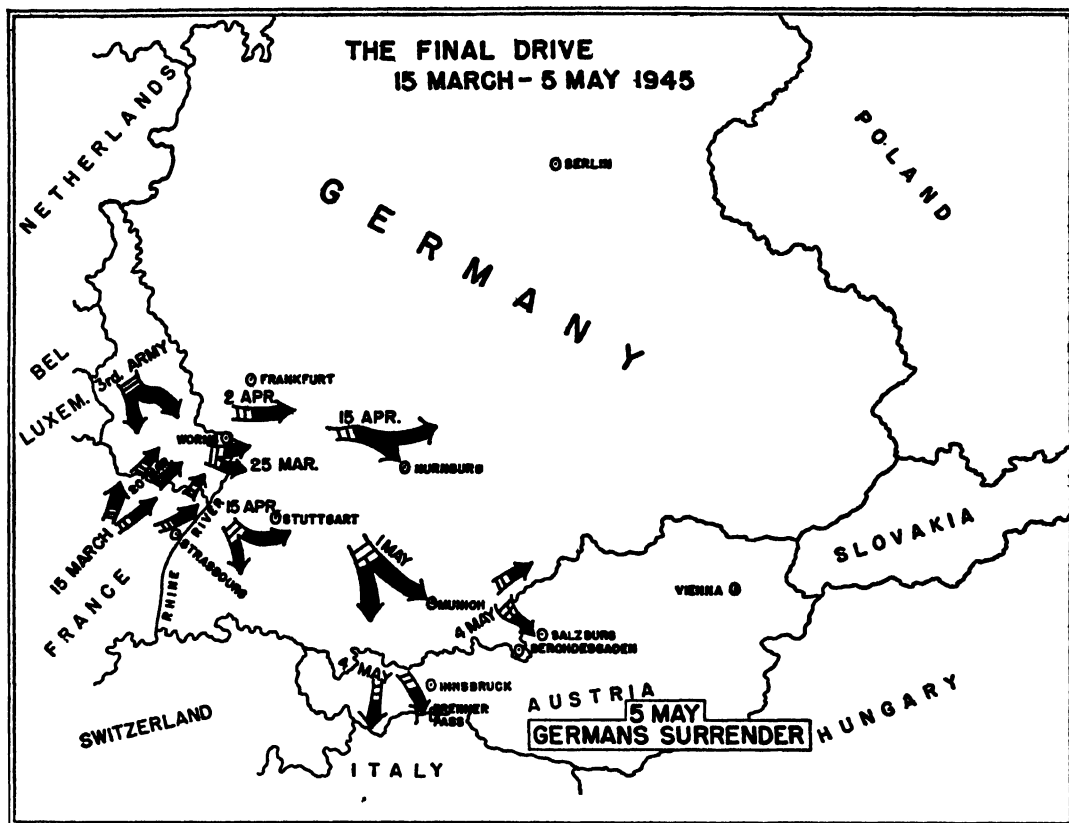
Meanwhile important events had been transpiring in the south. On January 22 the Soviet Union signed an armistice with a provisional government of Hungary stipulating that Hungary was to aid the Allies, although participation of Hungarian troops was not required, she was to return all territories and make restitution for war damages.

Budapest, surrounded by Russian Armies since Dec. 26, 1944, finally fell on February 13 after some of the most bitter house-to-house fighting of the war. The Second and Third Ukrainian Armies invested the twin city from both sides of the Danube. The city, doubly important because it

controlled the road to Bratislava and Vienna, was defended by the German IX and the Hungarian I Corps.

Pest, on the east side of the river, was cleared by January 18, but Buda held until February 13. The Russians announced that of the city's defenders 110,000 were taken prisoners and 49,000 killed, while 1,250 guns, 270 tanks, and a large amount of engines and railroad equipment were taken. The commander of the garrison, Colonel General Pfeffer-Wildenbruch, was reported to have been taken prisoner.

On the 27th anniversary of the Red Army, February 23, the Russians reported that in the first 40 days of the winter drive (up to February 23) 300 cities and thousands of villages had been taken, as were more than 100 factories, 2,400 rail stations and 9,500 miles of railroads. A total of 350,000 of the enemy were prisoners and 800,000 killed, 3,000 airplanes captured or destroyed, as well as 4,500 tanks and self-propelled guns and 12,000 guns of all calibers.



MOVEMENTS OF THE SIXTH ARMY GROUP, UNDER LT. GEN. JACOB A. DEVERS, U.S.A. (6th Army Group Hdq.)

Posen, which had been by-passed in the original sweep of Zhukov's First White Russian Army, was finally captured on February 23 after a month's siege. The commandant, Major General Matter, and 23,000 prisoners were taken. The Russians said that 25,000 Germans were killed. The victory was particularly significant in that it opened up communications to the Berlin-Stettin front where the Red Army previously had been operating on improvised supply lines. The Brandenburg front also was served by communications through Posen.

Early in March the First and Second White Russian Armies operated east and northeast of Stettin pushing to the Baltic Coast from a point east of the Oder estuary clear to the northwest of Gdynia except for the port of Kolberg, which held out. This action isolated Danzig and 150 miles of the Baltic Coast west of the city. Taken in this drive were the important cities of Koslin and Stargard, the latter being the point from which the Germans had counterattacked the First White Russian Army on its initial advance toward Berlin.

Having protected his right flank by the clearance of Pomerania, Marshal Zhukov further prepared his Oder front for the final assault on Berlin, by cleaning up many important points. He took Kammin on the Baltic on March 6. Kuestrin, strong German bridgehead east of the Oder, fell to his First White Russian Army on March 12 after severe fighting. For this event Moscow's guns fired their 300th victory salute since retaking Orel, Aug. 5, 1943.

Greifenhagen capitulated March 16 and Altdamm, on the east bank of the Oder opposite Stettin, fell on March 20.

With these victories the Armies of Zhukov and Konev now lined up on a 200 mile front facing west—a front that gave ample room for large scale operations and many points from which offensives could be launched.

On March 18 the First White Russian Army entered Kolberg, the first port on the open Baltic Sea to fall to the Red Army since the capture of Memel the previous January. Kolberg was isolated by Zhukov's forces during the drive to the Baltic two weeks previous but the German garrison had put up a hard fight in accordance with general German policy under which the troops in the Danzig Corridor still continued to hold the ports of Gdynia, Danzig, and Pillau and, in Latvia, the ports of Libau and Windau.

Kolberg gave the Soviet Baltic Fleet a base of operations from which it could tighten the blockade of the Bay of Danzig.

It was reported in March that Colonel General Ferdinand Schoerner had been appointed Commander in Chief of the German armies on the eastern front. Schoerner previously had been in Upper Silesia, but prior to that he had been in command in Latvia where he had prepared the defense of the ports which were still holding out.

Danzig fell on March 30—an event of far reaching strategic importance as well as of great morale value. The heavy pressure on Danzig and the port of Gdynia had begun to be applied by Marshal Rokossovsky's Second White Russian Army about two weeks previously, after he had finished helping Zhukov in the clean-up of eastern Pomerania. Gdynia was taken on March 28. With the capture of

Danzig the Russians came into possession of large stores of German arms and equipment, including 45 submarines taken in their pens. In the same period the Soviet Baltic Fleet, operating from Kolberg, took about 160 vessels of various types. The Baltic area was extensively used by the Germans for the training of submarine crews, trial runs of vessels, and for experimental work with new weapons, so any action which hampered her in the use of these waters was of direct aid to all of the Allied nations.

At the north end of the line, the Third White Russian Army, now commanded by Marshal Vassilevsky, who had succeeded Chernyakovsky upon the latter's death in February, cleaned up the Braunsberg pocket in East Prussia on March 20. Losing no time Vassilevsky immediately went to work on the assault on Koenigsberg, which he pressed vigorously until its capitulation on April 9. With the city went about 42,000 German prisoners. A German communiqué of April 12 announcing the fall of Koenigsberg stated that "General Lasch (who surrendered the fortress) was sentenced by court martial to death by hanging for his cowardly surrender to the enemy. His kin will be held responsible."

In southeast Europe, the Fourth Ukrainian Army, the command of which had passed to General Yeremenko, and the Second and Third Ukrainian Armies were active over a 300 mile front from the High Tatra mountains in Czechoslovakia and the Styrian Alps on the borders of Austria and Yugoslavia.

Yeremenko's army took Banska-Bystrica on March 26, starting the advance from the Hron to the Vah. Tolbukhin and Malinovsky's armies, after beating off the German counter-offensive in the Budapest area, took the offensive. Szekesfehervar, which had been taken on Dec. 24, 1944, and lost the next month, was again entered on March 24. In rapid succession the Red Army captured Gyer, Komarno, Szombathely, and Szopron. In moving into Austria the Soviet troops entered the tenth foreign country within one year.

Bratislava was captured April 4, then Wiener Neustadt, after which Russian armored forces began an encirclement of Vienna, breaking both road and rail communications to the city from the west. In Vienna's eastern suburbs other Russian units were hacking their way into the stronghold. On April 13 the capture of the city was completed by Marshal Tolbukhin's Third Ukrainian Army. Between March 16 and the fall of the city the Russians announced the capture of 130,000 men in the Vienna area, the huge number being the result of the German attempt to hold out instead of withdrawing in reasonable time as they had done in most instances prior to the fall of Budapest.

In the meantime the Second Ukrainian Army under Marshal Malinovsky had taken Hodonin in Czechoslovakia, on the west bank of the Morava River, 55 miles from Vienna, leaving clear the approach to Brno, Czechoslovakia's second city and a large armament manufacturing center.

On April 16 the Red Army began its "big push" for Berlin. A direct attack from the east was made by Zhukov while Konev's army moved across the Neisse River to approach Berlin from the south. Meanwhile, the German Ninth Army was concentrating southeast of Berlin. Konev, however, having captured Cottbus continued past Berlin to the approaches of Potsdam, while the First White Russian Army drove into the eastern suburbs of the German capital. At this point Zhukov sent a column south and Konev sent one north, so that the

two enclosed the German force southeast of Berlin. Next Zhukov moved a force northeast of Berlin then west to Nauen while Konev rushed some of his forces south of the city of Katzin, like Nauen west of Berlin. Then the two forces joined, isolating the Berlin area. Counterattacks to break out failed while the Red Army methodically proceeded to cut the area up into sections. On May 2 after day and night house-to-house fighting the remaining Germans surrendered—a force of 135,000 men. The Russians claimed that the battle had cost the Germans a total of nearly 500,000 in killed and prisoners.

While the Battle of Berlin had been in progress American and Red Army troops had joined at Torgau, on April 26, splitting Germany in two, Marshal Rokossovsky captured Stettin on April 27 and on May 2 made contact with British Field Marshal Montgomery's forces at Wismar.

In the south Yeremenko and Malinovsky had gone into Moravia.

Marshal Vassilevsky captured the East Prussia port of Pillau on April 25. On May 7 Breslau fell. Marshal Konev took Dresden on May 8 and entered Prague on May 9.

Thus in two and one-half years from the battle of Stalingrad the Red Army drove 1,400 miles to its meeting with the First U. S. Army at Torgau, Germany.

Western European Front. The Ardennes offensive, which began Dec. 16, 1944, had reached its maximum penetration of more than 50 miles into American lines and the bulge which it produced was in the process of being reduced as the year opened. Engaged in this, the last great German offensive, were the reconstituted Seventh German Army and the Fifth and Sixth SS Panzer Armies with a total of 24 divisions of which ten were panzers. The forces were under the over-all command of Field Marshal Karl Rudolph Gerd von Rundstedt with Field Marshal General Walther von Model in immediate command of operations. On the Allied side the defending forces, under the over-all command of General of the Army Dwight D. Eisenhower, were commanded in the north by British Field Marshal Sir Bernard L. Montgomery, commander of the 21st Army Group, under whose control most of the U.S. First and Ninth Armies had been placed, and in the south by General Omar N. Bradley, U.S.A., commander of the 12th Army Group.

The 21st Army Group opened a strong attack on the north side of the bulge on Jan. 3, thirteen days after the Third Army had executed a brilliant shift of the offensive from across the Saar to hit the other side of the bulge in southern Luxembourg. Despite the failure of the Germans to reach their primary objectives of Liege and Namur on the Meuse River (much less their ultimate objective of the supply port of Antwerp) they stubbornly resisted Allied pressure every inch of the way, so that by the end of the month when the reduction of the salient was completed their losses had run up to the terrific figure of 220,000 men, half of them prisoners. More than 1,400 German tanks and assault guns were lost. The weather was very bad, with snow, ice, and poor visibility, hampering both ground and air activity. Yet, taking every opportunity to get into the air, the air forces played an important part. It is reported that on Jan. 22 alone the Allied air force destroyed or damaged more than 4,192 pieces of heavy equipment.

British Prime Minister Churchill referred to the Battle of the Ardennes as the "greatest American battle of the war," pointing out that only one Brit-

ish Army Corps (the XXX Corps) was engaged and that "all the rest of the 30 or more divisions" were United States troops.

Meanwhile, in northern Alsace the U.S. Seventh Army, some of whose divisions had been detached for operations against the Ardennes bulge, withdrew in the face of enemy attacks, there being, as General Marshall reported, "ground to give." As a result the Germans reoccupied portions of the Maginot Line and cleared their West Wall in this area.

In the south Jan. 20 was chosen for the opening of an attack by the First French Army, General de Tassigny commanding, reinforced by some American Divisions made available by the then improved situation in Belgium. The Germans had been enlarging the bridgehead they already held around Colmar in southern Alsace and it was to reduce this that the French drive was aimed. The American XXI Corps made the drive through Colmar. The previous gains by the Germans not only were wiped out but the entire bridgehead was cleaned up, so that by early February the Allies were in possession of a line from Strasbourg to the border of Switzerland.

In February the Allies opened the great campaign that started on the Roer River and ended on the Elbe when victory came. The first phase of this grand operation as planned by General Eisenhower was for the First Canadian Army and the Ninth U.S. Army to push their way to the west bank of the Rhine River between Neuss and Emmerich, opposite the great industrial area of the Ruhr. Original plans had been for the whole operation to start early in January but the month's delay was necessitated by the Ardennes offensive. However, as a result of that action the German forces facing them were greatly weakened.

The campaign was opened Feb. 8 by the First Canadian Army, about 75 percent of which was British troops. The attack was preceded by six hours of artillery preparation and was provided with heavy air support. The drive got under way by quickly breaching successive lines of the Siegfried defenses. However, by the time Cleve had been captured and the Reichswald Forest cleared, the Germans had begun to recover from the initial shock. Paratroop units were brought into use and by their dogged fighting many road centers, including Goch and Calcar, were held by the Germans for some time until, often after fierce hand-to-hand fighting, they were driven out by superior numbers. The Germans attempted to stabilize a line through the Hochwald Forest to Geldern after Allied armored forces had broken through to Udem. This line could not be held because by this time the Ninth U.S. Army's operations began to have its influence felt in this area, so that the Germans were forced to fall back to the Wesel bridgehead with their flank at Xanten and Offenbergh. Allied pressure was continually maintained so that by the night of Mar. 9-10 the German troops were forced back across the Rhine.

The original plan had been for the Ninth U.S. Army to start its operations only a few days after those of the First Canadian Army so as to split the German reserves. This threat was forestalled by the Germans who on Feb. 9 blew up the Roer dams. This, together with the melting snow, turned the Roer River, which sometimes is only two feet deep in places, into a deep, fast running and dangerous waterway. For nearly two weeks the River maintained a rate of flow of from six to eight miles per hour, precluding the possibility of assault boating and bridging. During this period the Germans

moved up one Panzer Grenadier and two Panzer divisions to aid in the defense against the Canadian Army's drive. The Third U.S. Army, just south of the Ninth, was attacking to pin down further German reserves, with the result that when the Ninth Army was able to cross the river the attack was under favorable conditions.

Even so when the decision was made to move the Ninth across the Roer on Feb. 23 the river was still 80 yards wide with the current running $\frac{3}{4}$ to 5 miles per hour. The crossing was made on a 15-mile front, and at the same time the left corps of the First U.S. Army, to the south, attacked on a 9-mile front. It was the function of the First Army to protect the right flank and thus facilitate the first objective of getting the Ninth and the First Canadian Armies to the Ruhr section of the Rhine.

After the Roer crossing a number of bridgeheads were formed and linked up. Bridges were thrown across the river under concentrated German artillery fire, so that tanks and heavy guns could be brought over to support the breakout from the bridgehead. Armored and motorized infantry columns were sent out to the northeast and north. So rapid was the movement that a number of centers of resistance were by-passed by the advancing troops, to be mopped up later. Armored units reached the Rhine north and south of Düsseldorf by Mar. 2. By Mar. 3 the Ninth made contact with the First Canadian between Gildern and Kevelaer. The same day Muchen-Gladbach, Neuss, and Venlo were taken, and by Mar. 6 Krefeld, Homberg, and Rheinberg were free of Germans and the Ninth was on the Rhine along its entire front except in the northern sector where the Wesel bridgehead held out until Mar. 9.

Cooperating in these operations the Tactical and Strategic Air Forces struck at road and rail targets throughout all of Germany so as to isolate the battlefield. The air effort was hampered by bad weather, particularly during the period when the Germans were forming and holding their bridgehead at Wesel.

In this phase of the grand operations German casualties, according to figures from Allied headquarters, amounted to 52,000 captured and at least 60,000 killed and wounded, as the result of the U.S. Ninth and Canadian First Armies' actions. Allied casualties were placed at less than one-fifth of the Germans' total.

While this was going on the 12th Army Group, which now consisted of the First and Third U.S. Armies, also was active. Like that of the Armies to the north, the objective here was to clear all German forces west of the Rhine.

On Mar. 1 the First Army had made several crossings of the Erft River, cleared 26 towns and villages, and moved to within six and a half miles of Cologne. On the same day the Third Army cleared Bitburg and 19 other towns, and entered Trier the capture of which was completed the next day.

On Mar. 3 the First Army reached the Rhine between Düsseldorf and Cologne. Cologne was entered on Mar. 5 and the next day it was taken by the Third Armored and 104th Infantry Divisions of the First U.S. Army. At the same time the Fourth Armored Division of the Third Army was making a daring and spectacular run to the Rhine. This division broke loose from the Kyll River bridgehead near Bitburg on Mar. 5, making 16 miles that day to go through Eifel, 20 miles the next day, while on Mar. 7 it broke through to the Rhine northwest of Coblenz.

On Mar. 7 the Ninth Armored Division of the

First Army reached the Rhine and captured the bridge at Remagen intact. The Germans had attempted to demolish it just as they had the other Rhine Bridges, but at the railroad bridge only part of the demolition charge went off and while the bridge was damaged it had not fallen into the water. By fast staff work and shifting of plans quick advantage was taken of the situation. Engineers said that the "safety factor" was all that was holding the bridge up, but it held for five days and when it fell few men were lost, while in the meantime four floating bridges had been put across the river.

The bridgehead at Remagen was built up rapidly in spite of heavy German air attacks. Lack of adequate transportation hampered the bringing up of German reserves, but those that got there stubbornly resisted the expansion of the bridgehead which rapidly increased in value to the Allies.

The grand action that had begun in the north with the First Canadian Army and had, step by step, expanded by taking in Armies to the South, the Ninth U.S. Army, then the First U.S. Army, and the Third U.S. Army, now increased to take in the southernmost group—the Sixth Army Group composed of the Seventh U.S. Army and the First French Army. On Mar. 4 the Seventh Army made small gains, the next day clearing Forbach.

From this point on to Mar. 25 the Seventh Army engaged successfully in operations to close the area to the Rhine thus bringing to a successful conclusion a series of planned Allied operations all of which had the single purpose of destroying or driving out all German forces west of the Rhine River. The concluding chapter in this phase began with the Seventh's attack northeast in the Saar pocket on the morning of Mar. 15, which operation was coordinated with the Third Army's drive of Mar. 13 southeast from Trier and their establishment of a bridgehead over the Moselle on Mar. 14.

The Seventh's advance in the Saar was against strong, well-prepared opposition over terrain extensively mined and booby-trapped. Strong defenses, including the Maginot Line and rivers (the Moder, Sauer, and Lauter on the Army's right and the Horn and Sarre on the left), and finally the heavy belt of the Siegfried Line, opposed the advancing Army. Nevertheless by Mar. 20 the right of the Seventh Army had advanced 20 miles and had closed the Siegfried Line and on the left had breached it, reaching Homburg, Zweibracken and Saarbrücken. Armored elements then passed through the infantry, advanced to the south of Kaiserlautern, and contacted elements of the Third Army. Firmsasens was occupied on Mar. 22 and all organized resistance west of the Rhine ceased on Mar. 25.

Meanwhile, the Third Army made good initial advances in its attack southeast from the vicinity of Trier. On Mar. 14 a second attack was directed across the Moselle River west of Coblenz in a drive to the south. A wide and deep bridgehead was quickly established by the infantry. Armored units then passed through this bridgehead, and by Mar. 16 had advanced 35 miles, reached Bad Kreuznach and seized two bridges intact over the Nahe River.

Sensitive to the fact that the Third Army's armored thrusts to Bad Kreuznach seriously threatened their rear, the Germans hastily pulled strength from the Trier front and tried unsuccessfully to penetrate the shoulder of the Moselle breakthrough. The Allies then shifted armored units from the Seventh to the Third Army front and on Mar. 18 a complete breakthrough was effected in this area so that by Mar. 20 the outskirts of Kaiserlautern were

reached and contact made with armored elements of the Moselle attack. The remnants of four divisions of Germans were surrounded in the pocket that resulted.

Worms was entered on Mar. 21 and Mainz fell on Mar. 23. Infantry and Cavalry cleaned up enemy pockets of resistance while armored units cut German retreat routes and isolated additional German Forces.

Having reached the Rhine so quickly, the Third Army pushed across the river and by Mar. 23 had established a substantial bridgehead in the area south of Mainz.

Through all these operations weather permitted maximum air operations and every advantage was taken of it. German strong points, gun positions, avenues of withdrawal, communications centers, and supply installations were effectively attacked. As many as 1,000 planes daily were used against German columns.

The Saar, which was thus lost to the Germans, had been a source of much of their supply of both coal and iron for industrial uses. In addition, this major defeat lost to Germany much needed stores of equipment and many men. Of the 24 divisions used for the defense of the area west of the Rhine and south of the Moselle, the Germans lost 132,000 men as prisoners and suffered an estimated 56,000 casualties in killed and wounded. American total casualties were announced as less than one-eighth of the enemy's.

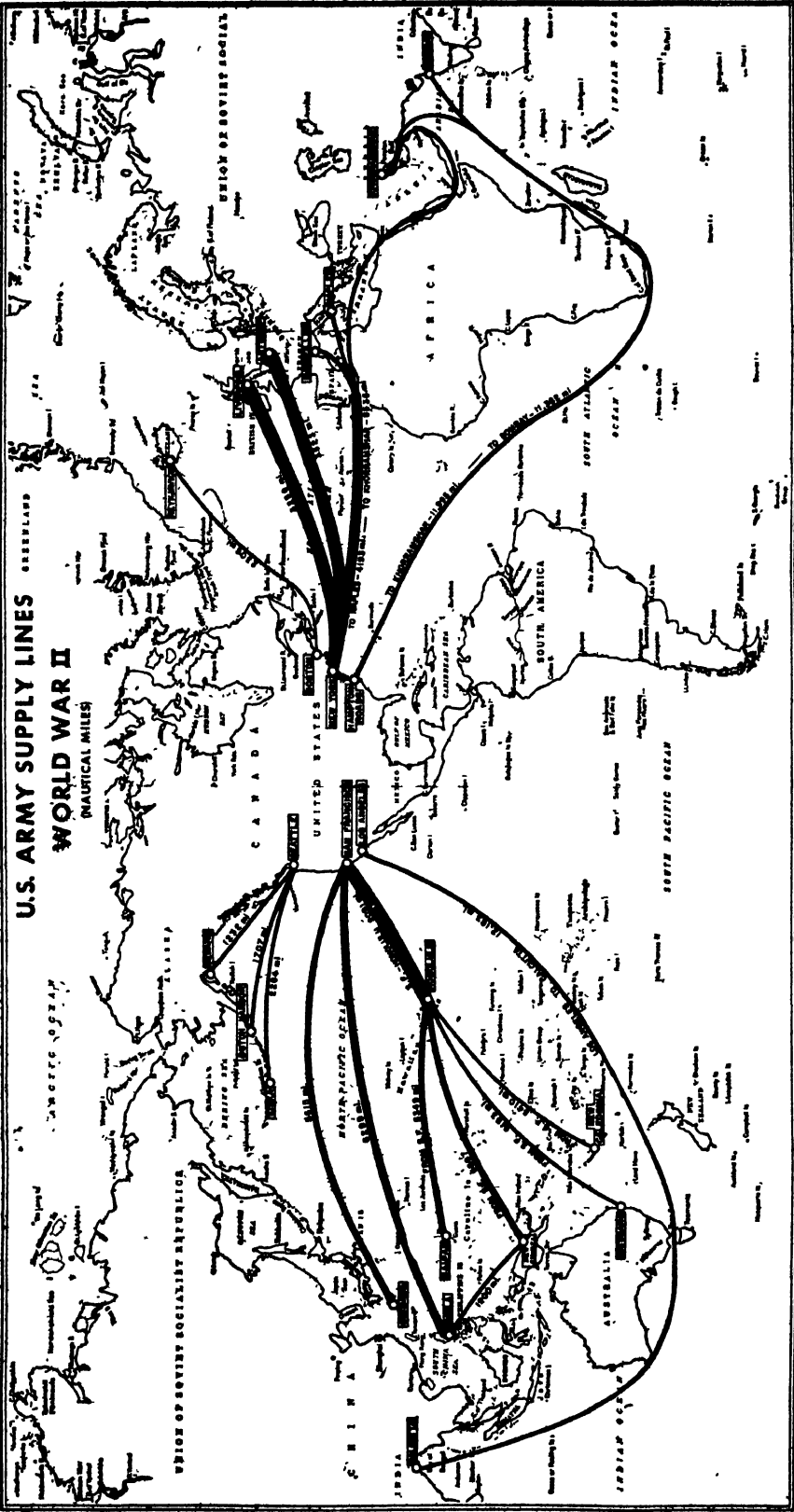
Gen. Eisenhower's decision to have the Third Army cross the Moselle and clean up west of the Rhine, instead of crossing the Rhine south of the Remagen bridgehead and moving northward to join with the First Army Forces, has been characterized as the second most critical decision in the campaign. The Germans expected the other decision, with the result that the Saar and the Palatinate west of the Rhine were promptly cleaned up.

According to Lt. Gen. Walter B. Smith, USA, Gen. Eisenhower's Chief of Staff, the most critical decision was that to undertake the gigantic double envelopment of the Ruhr rather than a single direct thrust into the Reich north of the Ruhr. This Ruhr action, which General Smith described as the "largest double envelopment in military history," was accomplished with the Ninth Army on the North driving to the east and southeast and the First Army from the south driving east thence northeast. The movement was executed with such skill and precision and the operations proceeded with such rapidity that the encirclement was completed on Apr. 1.

Preceding this movement the Second British Army crossed the Rhine on Mar. 23, the Ninth and Third U.S. Armies on Mar. 24 and the Seventh U.S. Army two days later. Naval landing craft of the Royal and U.S. Navies, secretly convoyed from the coast, partly by water-way and partly over roads, assisted the ground forces in crossing the Rhine. They also helped in the evacuation of casualties and performed patrol duties during the critical hours of crossing.

Reporting on this unusual participation of naval units in a military campaign in the heart of Europe, Fleet Admiral Ernest J. King, U.S. Navy, stated:

"The Naval crews assigned to the operation began training in England in Oct. 1944 and held their final practice maneuvers on the continent later in the winter. Considerable ingenuity and improvisation were necessary to overcome technical difficulties, the craft employed having been constructed for salt water use and not as river craft in the fresh



THE FAR-FLUNG LINES OF U. S. WORLD SUPPLY

(Annual Report, Army Service Forces)

water of the swift moving Rhine. Five LCVF units of 24 craft each were formed in England and later moved to the Continent and placed under the operational control of U.S. Army commanders and administrative control of Vice Admiral Alan G. Kirk, Commander, U.S. Naval Forces France; of these, three actually participated in the crossings."

After completing the encirclement of the Ruhr the drive eastward continued at a rapid pace. Armored elements swept forward, going around strongly defended centers and splitting up and isolating German units. Behind them came infantry to clean up remnants and solidify the gains. Most of it was moved by its motor transportation and some was aided by tank units. The Air elements maintained an incessant bombardment of the disintegrating German forces. On Apr. 11 Armored units reached the banks of the Elbe River near Magdeburg. There was not much opposition, but by an understanding with the Russians the Elbe was as far as the Allied forces were to go in this area. In explaining this agreement, General Bradley said: "Our plan was to meet along this line. It is much better to meet with one or the other stationary than with both on the move. You are less apt to have incidents. You have to remember we had never worked with the Russians. Methods of identification are not what we have among ourselves. Besides, our supply lines were long."

The significance of the Battle of the Ruhr is clearly brought out by Gen. Eisenhower in an Order of the Day issued on Apr. 20 as follows:

TO EVERY MEMBER OF THE A.E.F.:

The battle of the Ruhr has ended with complete success. Following hard upon the final destruction of the German forces west of the Rhine, the 21st Army Group thrust powerfully across that river with the U.S. Ninth Army under command. Simultaneously, rapid drives across the Rhine and from the Remagen bridgehead by 12th and 6th Army Groups provided the southern arm of a great double envelopment which completely encircled the entire German Army Group 'B' and two corps of Army Group 'H' whose mobility was rendered almost zero by our magnificent and tireless air forces. Thereafter, in the pocket thus created, the 12th Army Group eliminated 21 enemy divisions, including three Panzer, one Panzer grenadier, and three parachute divisions. Over 817,000 prisoners of war were captured including 24 generals and one admiral. Many tanks and more than 750 guns were destroyed or taken. Booty is immense and still being counted. The enemy's total losses in killed and wounded will never be accurately known.

The rapidity and determination with which this brilliant action was executed tore asunder the divisions of Field Marshal Model, and enabled all Army Groups without pause to continue their drive eastwards into the heart of Germany.

This victory of Allied arms is a fitting prelude to the final battles to crush the ragged remnants of Hitler's armies of the west, now tottering on the threshold of defeat.

So rapid had been the advance all along the line that on the day General Eisenhower issued the above order (Apr. 20) the First Canadian Army was fighting along the south of the Zuider Zee; the Second British Army took Delmenhorst, five miles west of Bremen; Ninth U.S. Army units bottled up an enemy counter-attack in the Brunswick area; the First U.S. Army took Leipzig; the Third U.S. Army closed up to the Czechoslovakian border; and the Seventh U.S. Army and the First French Army were driving south to outflank Stuttgart on two sides in the Reutlingen area.

On Apr. 23 the gap between the western Allied Forces and the Russians had narrowed so that the Ninth Army's forward troops were picking up Russian tactical radio traffic southeast of Magdeburg. On April 27 it was announced that the First Army's 69th Infantry Division had linked up with the 58th Russian Guards Division of the First Ukrainian

Army at Torgau on the Elbe River, 28 miles north-east of Leipzig.

General Omar N. Bradley, U.S. Army, commander of the Twelfth Army Group, issued the following Order of the Day:

SOLDIERS OF THE FIRST, THIRD, NINTH, AND FIFTEENTH AMERICAN ARMIES:

At 1640 hours Apr. 25, 1945, in the twenty-ninth month of our land war against the German Government, American troops of the 12th Army Group joined forces with Soviet elements of Marshal Koniev's First Ukrainian Army Group.

These Armies have come to you from the ruins of Stalingrad and Sevastopol—across the scorched cities of the Ukraine. In two years they have smashed 1,400 miles through German Armies to drive the enemy from Russia and pursue him to the Elbe.

Their achievements—and they have given immortality to a people that would not be conquered—are made more meaningful by your own deeds.

Across 3,500 miles of an ocean supply line, you forced a coast the enemy had been years preparing against you. Within four months after landing you destroyed whole Armies—to take Paris, free France, and give the world a symbol of freedom. When the enemy raised a new army and threw it into the winter battle of the Ardennes, you smashed it and flung its remnants back. You have beaten and broken down his mighty Siegfried line. You crossed the Rhine in your stride, encircled and reduced the Ruhr.

While demonstrating new lessons in mobile warfare, you have annihilated whole groups of German Armies in the West on their own German soil. In ten months you have fought your way 700 miles from the beaches. These accomplishments were secured by your courage, your resourcefulness, and by your comrades who died to achieve them.

You have shared in the liberation of four nations, given hope to others, and conquered half of Germany.

The people of America, who armed you, have had great faith in you. You have justified that faith as you will in the battles that follow.

By the end of April the First Canadian Army was mopping up north of Delmenhorst with units four miles southeast of Oldenburg; the Second British Army had two bridges over the Elbe at Lauenburg and a bridgehead seven miles deep; Ninth U.S. Army troops were in contact with the Russians at Apollensdorf; First U.S. Army troops were in contact with Russian elements near Wittenberg on the Elbe; Third U.S. Army infantry had closed up to the Passau along the left bank of the Danube with some units operating south of the Isar River; the Seventh U.S. Army had cleared Munich while other units captured Dachau; and First French Army troops were in possession of Friedrichshafen and across the Austrian frontier at the eastern end of Lake Constance.

By May 4 disintegration of German forces had reached such a point that Gen. Eisenhower issued the following statement:

The German forces on the Western Front have disintegrated. Today what is left of two German Armies surrendered to a single American division—the 102nd—commanded by Maj. Gen. Frank Keating.

In the north the remaining forces in Northwest Germany, Holland, Denmark and the Frisian Islands, including Heligoland, surrendered to Field Marshal Montgomery.

In the south Allied troops from General Devers' command and from Italy have joined up. On the Czechoslovakian border a Panzer division gave up unconditionally to Gen. Bradley's forces.

Any further losses the Germans incur on this front are due to their failure instantly to quit.

They know they are beaten. Any further hesitation is due either to their own stupidity or that of the German Government.

On land, sea and in the air the Germans are thoroughly whipped. Their only recourse is to surrender.

The next day Gen. Devers, commanding the Sixth Army Group, accepted the surrender of German Army Group "C," the surrender including 9,500 square miles of territory. On May 6 the 21st Army group units began occupational duties; the Third Canadian Division occupied the Emden sec-

tor, the First Polish Armored went into Wilhelms-haven, and the Second British Army occupied Cuxhaven with units penetrating north toward Denmark.

On May 7 an *Act of Surrender* was signed by Col. Gen. Gustaf Jodl, Chief of the Wehrmacht and Chief of Staff to Grand Adm. Karl Doenitz, who had succeeded Hitler as head of the State. The surrender papers were signed in Gen. Eisenhower's forward headquarters at Reims, France, and were witnessed by Lt. Gen. Walter Bedell Smith, Gen. Eisenhower's Chief of Staff; Gen. Ivan Susloparoff, head of the Russian Mission to France, and Gen. F. Sevez, of France. The terms of the surrender were as follows:

- 1. We, the undersigned, acting on authority of the German High Command, hereby surrender unconditionally to the Supreme Commander, Allied Expeditionary Force, and simultaneously to the Soviet High Command, all forces on land, sea, and in the air who are at this date under German control
- 2. The German High Command will at once issue orders to all German military, naval, and air authorities and to all forces under German control to cease active operations at 2301 hours Central European Time on Eight May and to remain in the positions occupied at the time. No ship, vessel, or aircraft is to be scuttled, or any damage done to their hull, machinery, or equipment.
- 3. The German High Command will at once issue orders to the appropriate commanders, and ensure the carrying out of any further order issued by the Supreme Commander, Allied Expeditionary Force, and by the Soviet High Command.
- 4. This Act of Military Surrender is without prejudice to, and will be superseded by, any general instrument of surrender imposed by, or on behalf of the United Nations and applicable to Germany and the German Armed Forces as a whole.
- 5. In the event of the German High Command or any of the forces under their control failing to act in accordance with this Act of Surrender, the Supreme Commander, Allied Expeditionary Forces, and the Soviet High Command will take such punitive or other action as they deem appropriate.

Although word leaked out both through German and Allied sources, official announcement of the surrender was withheld pending further ratification by the Russians which was forthcoming the next day.

Allied ground forces participating in these operations included 60 American divisions, comprising three airborne, 15 armored, and 42 infantry divisions. In addition there was a total of 14 British divisions, five Canadians, 11 French, and one Polish division.

U.S. casualties were reported as follows:

- Army—126,000 killed, 369,334 wounded, 3,996 missing, and 6,125 prisoners, making a total of 506,297. (report dated Oct. 31, 1945.)
- Navy—6,415 killed, 594 missing, 3,612 wounded or injured, 29 prisoners of war, making a total of 10,650. (Report, which includes Atlantic area, dated May 8, 1945.)
- Marine Corps—32 killed, one wounded. (Report, which includes Atlantic area, dated May 8, 1945.)
- Coast Guard—508 dead. (Report, which covers all operations against the European enemy, dated May 8, 1945.)

Air power played a major and decisive role in the entire campaign, both in its strategic opera-

tions against German industry and homeland and in its tactical operations in conjunction with the ground troops. A joint statement by the British Air Ministry and the U.S. Strategic Air Forces summed up the principal accomplishments as follows:

- 1. Air superiority was achieved before the invasion of Normandy and maintained throughout the successive stages of the Battle of France, the crossing of the Rhine, and the Battle of Germany. During the last few weeks a large proportion of Germany's air force was destroyed wholesale on the ground.
- 2. The German oil supply was steadily reduced in a 12-month period despite a vigorous effort by the enemy to repair bomb-damaged plants to a point where his over-all oil production was only seven and one-half percent of what it was in April, 1944, and his petrol production was only three and one-half percent. This seriously affected his war potential on all fronts—land, sea, and air—so that at the end, neither his air force nor his army was mobile.
- 3. At various stages of the campaign by dropping a more concentrated weight of explosives than ever before used in warfare, the heavy bombers paved the way for a ground force offensive that later broke through. This was the case at Caen, St. Lo, the Ruhr and the Rhine.
- 4. At various stages, the strategic bombers joined the tactical air forces in the job of isolating the battlefields. So successful was this program that the enemy could never move in his reinforcements without the utmost delay and confusion.
- 5. On several occasions, this interdiction by all air forces was followed by an encirclement of the enemy and he was cut to pieces by strafing and bombing of the pockets or forced to surrender in large force. This occurred at Falaise, along the Seine, along the Loire, and in the Ruhr.
- 6. The special weapons developed by the enemy, notably the V-bomb and jet-propelled airplane, were reduced in effectiveness by our bombing of component factories, experimental stations, launching sites in the case of V-1s, and airfields in the case of jet aircraft.

In September a special U.S. Strategic Bombing Survey, the membership of which was composed of civilians, reported to the President on the European war. Among its conclusions were:

- By the beginning of 1945, before the invasion of the homeland itself, Germany was reaching a state of helplessness. Her armament production was falling irretrievably, orderliness in effort was disappearing, and total disruption and disintegration were well along. Her armies were still in the field. But with the impending collapse of the supporting economy, the indications are convincing that they would have had to cease fighting—any effective fighting—within a few months.
- As the air offensive gained in tempo, the Germans were unable to prevent the decline and eventual collapse of their economy. Nevertheless, the recuperative and defensive powers of Germany were immense; the speed and ingenuity with which they rebuilt and maintained essential war industries in operation clearly surpassed Allied expectations.
- The achievements of Allied air power were attained only with difficulty and great cost in men, material, and effort. Its success depended on the courage, fortitude, and gallant action of the officers and men of the air crews and commands. It depended also on a superiority in leadership, ability, and basic strength.

Following is the Order of Battle, European Theater of Operations (as of May 7, 1945) as given in the final report of the Chief of Staff, Gen. of the Army Marshall. (The order of battle of the Allies of the U.S. is not shown below Army level, except where American forces were under their operational control.)

ORDER OF BATTLE, EUROPEAN THEATER OF OPERATIONS.

Unit	Commander	Location
Supreme Headquarters Allied Expeditionary Forces.	General of the Army, Dwight D. Eisenhower	Main Headquarters, Versailles, France.
		Advance Headquarters, Reims, France.
Northern Group of Armies (21st Army Group)	F/M Sir Bernard L. Montgomery ..	Suchteln, Germany.
First Canadian Army ..	Gen. H. D. G. Crerar	Holland.
Second British Army	Lt. Gen. Sir Miles C. Dempsey ..	Germany.
XVIII Corps (Airborne) ..	Maj. Gen. M. B. Ridgway	Germany.
5th Armored Division ..	Maj. Gen. L. E. Oliver	Germany.
7th Armored Division ..	Maj. Gen. R. W. Hasbrouck	Germany.
82d Airborne Division ..	Maj. Gen. J. M. Gavin ..	Germany.
8th Infantry Division ..	Maj. Gen. B. E. Moore ..	Germany.

Unit	Commander	Location
Central Group of Armies (12th Army Group)	Gen. Omar N. Bradley	Wiesbaden, Germany.
Ninth Army	Lt. Gen. William H. Simpson	Braunschweig, Germany.
XIII Corps	Maj. Gen. A. C. Gillem, Jr.	Germany.
88th Infantry Division	Maj. Gen. Paul W. Baade	Germany.
84th Infantry Division	Maj. Gen. A. R. Bolling	Germany.
102d Infantry Division	Maj. Gen. F. A. Keating	Germany.
XVI Corps	Maj. Gen. J. B. Anderson	Germany.
29th Infantry Division	Maj. Gen. C. H. Gorhardt	Germany.
75th Infantry Division	Maj. Gen. R. E. Porter	Germany.
79th Infantry Division	Maj. Gen. I. T. Wyche	Germany.
95th Infantry Division	Maj. Gen. H. L. Twaddle	Germany.
XIX Corps	Maj. Gen. R. S. McLain	Germany.
2d Armored Division	Maj. Gen. I. D. White	Germany.
8th Armored Division	Maj. Gen. J. M. Devine	Germany.
30th Infantry Division	Maj. Gen. L. S. Hobbs	Germany.
88d Infantry Division	Maj. Gen. R. C. Macon	Germany.
First Army	Gen. Courtney H. Hodges	Wielmar, Germany.
78th Infantry Division	Maj. Gen. E. P. Parker, Jr.	Germany.
VII Corps	Lt. Gen. J. L. Collins	Germany.
8d Armored Division	Brig. Gen. Doyle O. Hickey	Germany.
9th Infantry Division	Maj. Gen. L. A. Craig	Germany.
69th Infantry Division	Maj. Gen. Emil F. Reinhardt	Germany.
104th Infantry Division	Maj. Gen. Terry Allen	Germany.
VIII Corps	Maj. Gen. Troy H. Middleton	Germany.
6th Armored Division	Brig. Gen. George W. Read, Jr.	Germany.
76th Infantry Division	Maj. Gen. William R. Schmidt	Germany.
87th Infantry Division	Maj. Gen. Frank L. Culin, Jr.	Germany.
89th Infantry Division	Maj. Gen. Thomas D. Finley	Germany.
Third Army	Gen. George S. Patton, Jr.	Erlangen, Germany.
4th Infantry Division	Maj. Gen. Harold W. Blakeley	Germany.
70th Infantry Division	Maj. Gen. A. J. Barnett	Germany.
III Corps	Maj. Gen. James A. Van Fleet	Germany.
14th Armored Division	Maj. Gen. Albert C. Smith	Germany.
99th Infantry Division	Maj. Gen. Walter E. Lauer	Germany.
V Corps	Maj. Gen. Clarence R. Huebner	Germany.
9th Armored Division	Maj. Gen. John W. Leonard	Germany.
16th Armored Division	Brig. Gen. John L. Pierce	Czechoslovakia.
1st Infantry Division	Maj. Gen. Chft Andrus	Czechoslovakia.
2d Infantry Division	Maj. Gen. Walter M. Robertson	Czechoslovakia.
97th Infantry Division	Brig. Gen. Milton B. Halsey	Czechoslovakia.
XII Corps	Maj. Gen. Stafford Leroy Irwin	Germany.
4th Armored Division	Maj. Gen. William M. Hoge	Czechoslovakia.
11th Armored Division	Maj. Gen. Holmes E. Dager	Austria.
5th Infantry Division	Maj. Gen. Albert E. Brown	Germany.
26th Infantry Division	Maj. Gen. Willard S. Paul	Austria.
90th Infantry Division	Maj. Gen. Herbert L. Earnest	Czechoslovakia.
XX Corps	Lt. Gen. Walton H. Walker	Germany.
13th Armored Division	Maj. Gen. John Milliken	Germany.
66th Infantry Division	Maj. Gen. Stanley E. Reinhart	Austria.
71st Infantry Division	Maj. Gen. Willard G. Wyman	Austria.
80th Infantry Division	Maj. Gen. Horace L. McBride	Austria.
Fifteenth Army	Lt. Gen. Leonard T. Gerow	Bad Neunahr, Germany.
66th Infantry Division	Maj. Gen. Herman F. Kramer	France.
106th Infantry Division	Maj. Gen. Donald A. Stroh	France.
XXII Corps	Maj. Gen. Ernest N. Harmon	Germany.
17th Airborne Division	Maj. Gen. William M. Miley	Germany.
94th Infantry Division	Maj. Gen. Harry J. Malony	Germany.
XXIII Corps	Maj. Gen. Hugh J. Gaffey	Germany.
28th Infantry Division	Maj. Gen. Norman D. Cota	Germany.
Southern Group of Armies (6th Army Group)	Gen. Jacob L. Devers	Heidelberg, Germany.
Seventh Army	Lt. Gen. Alexander M. Patch	Schwabischgmund, Germany.
12th Armored Division	Maj. Gen. Roderick R. Allen	Germany.
63d Infantry Division	Maj. Gen. Louis Hibbs	Germany.
45th Infantry Division	Maj. Gen. Robert T. Frederick	Germany.
100th Infantry Division	Maj. Gen. W. A. Burress	Germany.
XXI Corps	Maj. Gen. Frank W. Milburn	Germany.
101st Airborne Division	Maj. Gen. Maxwell D. Taylor	Germany.
36th Infantry Division	Maj. Gen. John E. Dahlquist	Austria.
XV Corps	Lt. Gen. Wade H. Haislip	Germany.
20th Armored Division	Maj. Gen. Orlando Ward	Germany.
8d Infantry Division	Maj. Gen. John W. O'Daniel	Germany.
42d Infantry Division	Maj. Gen. Harry J. Collins	Germany.
86th Infantry Division	Maj. Gen. Harris M. Melasky	Austria.
VI Corps	Maj. Gen. Edward H. Brooks	Germany.
10th Armored Division	Maj. Gen. William H. H. Morris, Jr.	Austria.
44th Infantry Division	Maj. Gen. William F. Dean	Austria.
103d Infantry Division	Maj. Gen. Anthony C. McAuliffe	Austria.
First French Army	Gen. Jean J. de Lattre de Tassigny	Lindau, Germany.
SHAEP Reserve		
First Allied Airborne Army	Lt. Gen. Louis H. Brereton	Maison LaFitte, France.
13th Airborne Division	Maj. Gen. Elbridge G. Chapman, Jr.	France
US Strategic Air Forces in Europe *	Gen. Carl A. Spaatz	Reims, France.
Eighth Air Force	Lt. Gen. James H. Doolittle	High Wycombe, Bucks, England.
1st Air Division	Maj. Gen. Howard McC. Turner	England.
2d Air Division	Maj. Gen. Wm. E. Kepner	England.
3d Air Division	Maj. Gen. Earle E. Partridge	England.
Ninth Air Force	Lt. Gen. Hoyt S. Vandenberg	Wiesbaden, Germany.
IX Bomb Division	Maj. Gen. Samuel E. Anderson	Belgium.
IX Tactical Air Command	Maj. Gen. Elwood R. Quesada	Germany.
XIX Tactical Air Command	Maj. Gen. Otto P. Weyland	Germany.
XXIX Tactical Air Command	Brig. Gen. Richard E. Nugent	Germany.
First Tactical Air Force (Prov.)	Maj. Gen. Robt. M. Webster	Heidelberg, Germany.
XII Tactical Air Command	Brig. Gen. Glenn O. Barcus	Darmstadt, Germany.
1st French Air Command	Gen. de Brig. Paul Gerardot	Issenheim, France.
IX Troop Carrier Command	Maj. Gen. Paul L. Williams	Louvesienne, France.

* Exercised operational control over Fifteenth Air Force shown under Mediterranean Theater of Operations

Occupation of Germany. When Germany fell the Allied powers were ready with plans for its occupation. The Yalta Conference had decided that Germany was to be governed through a Control Council on which each of the four powers was to be represented and each would occupy and govern a specified zone. Similar plans were made and carried out for Austria.

For months prior to Germany's collapse the U.S. Army, Navy, and Air Forces were perfecting plans for the occupation of that part of Germany which was assigned to their jurisdiction, which included the whole of Bavaria, Wurtemberg, Hesse and Hesse-Nassau, and the northern portion of Baden, and, in addition, a portion of Berlin and the ports of Bremen and Bremerhaven. On May 11, within a few days of the surrender, the U.S. announced the organizational plans for its part in the military government of Germany. A U.S. group Control Council was set up divided into 12 major divisions roughly corresponding to the ministries of the German central government. These divisions were:

(1) Three military divisions—Army (Ground), Naval and Air—to deal with the demobilization of the German armed forces, and the disarmament of Germany.

(2) The Transport Division to regulate traffic movements, supervise railway, road and inland water transportation systems, and, with the Naval Division, handle port and coastal operations.

(3) The Political Division to deal with all foreign affairs, handle domestic political matters, protect American interests in Germany.

(4) The Economic Division to deal with such problems as food, agriculture and forestry, fuel and mining, price control and rationing, public works and utilities, internal and foreign trade, industry, conversion and liquidation, and requirements and allocations.

(5) The Finance Division to control public finance, and deal with financial institutions, foreign exchange, currency, and accounts and audits.

(6) The Reparation, Deliveries and Restitution Division to supervise, in the American Zone, the execution of these policies as agreed upon in the Control Council.

(7) The Internal Affairs and Communications Division to supervise public safety, including control of civil police forces, public health and welfare, post, telephone and telegraph, military communications, civil service and local government, education and religious affairs.

(8) The Legal Division to give legal advice to the Commander and other divisions to have jurisdiction over prosecution of war criminals, and to exercise proper controls over Allied Military courts, German ordinary and military courts, and prisons.

(9) The Prisoners of War and Displaced Persons Division.

(10) The Manpower Division to deal with problems of labor relations and allocations, wages and labor policies, housing and labor information.

When hostilities ended in Europe the United States had 3,500,000 men in that theater. By Sept. 1, this number had been reduced to 2,312,000 and by the end of the year to 673,000. During the same period the American forces in Europe established military government in the U.S. occupied zones of Germany and Austria, maintained law and order, and made considerable progress in repatriating displaced persons, disposing of German prisoners of war and in inventorying and safeguarding surplus American property and enemy war materials. More than 2,708,000 displaced persons were returned to their native countries by U.S. Forces.

In Italy the Allied powers resumed diplomatic relations with the Italian Government early in 1945 so that from that time political matters, which formerly came within the scope of the Allied Control Commission, have been dealt with by the diplomatic representatives. By the end of the year most of Italy had been transferred from control of the Allied Military Government to that of the Italian Government.

Southeast Asia. In the India-Burma theater, the Japanese, having been defeated in the 1944 Imphal-Kohima offensive against India, apparently based their 1945 plans largely on holding actions. They sought to hold the British in Arakan, in Central Burma they attempted to profit from the natural defensive positions by delaying actions, and in the northeast their efforts were devoted to delaying the reopening of the Burma Road.

Opposing the Japanese were the forces of the Southeast Asia Command, which had been set up in 1943 to drive the Japanese out of that area and to keep China in the war by providing the means to get supplies and equipment to her. Adm. Lord Louis Mountbatten was Supreme Allied Commander and at the close of the campaign his Deputy Supreme Allied Commander was Lt. Gen. R. A. Wheeler, U.S. Army. Adm. Sir Arthur J. Power was Commander-in-Chief of the East Indies Fleet, and Air Marshal Sir Keith R. Park was Allied Air Commander-in-Chief.

The Allied land combat force, according to British figures, was composed approximately of 340,000 Indians, 100,000 British, 70 Africans, 65,000 Chinese, and 10,000 Americans, supported by 47 American and British air squadrons. Including all categories of troops, the U.S. had 166,600 men in the India-Burma theater when the Japanese surrendered.

Headquarters for the command was at Kandy, Ceylon, which was closer to Singapore, an ultimate objective of the campaign, than any other available base.

The Allied Land forces were under the command of General Sir Oliver Leese and included the following three major elements:

The Northern Combat Area Command including four American-trained Chinese Divisions, the British 36th Division, and the U.S. Mars Force of two brigades, all under the command of Lt. Gen. Daniel I. Sultan, U.S. Army.

The Fourteenth British Imperial Army, which included the IV Corps and the XXXIII Corps, with a total of 10 to 12 divisions, under the command of Lt. Gen. Sir William Joseph Slim.

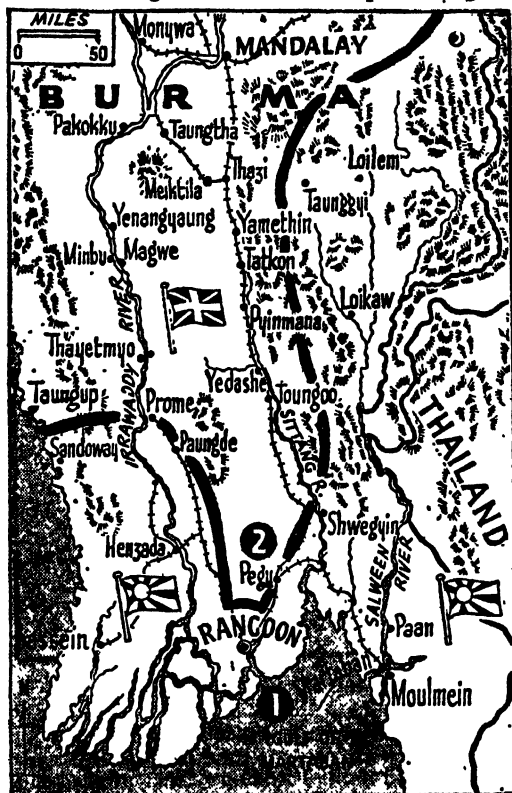
The XV Corps with three divisions of Indian and African troops, commanded by Lt. Gen. Sir Philip Christison.

One of the major objectives, the opening of a road to China was accomplished at the beginning of the year. At the Burma-China border, Wanting was occupied by Chinese forces on Jan. 20. Two days later the road to China was opened. The first China-bound convoy left Ledo on Jan. 12 and arrived in Kunming Feb. 4.

At the beginning of the year a British Commando Brigade landed on the island of Akyab, from which the Japanese had withdrawn, and began preparing it as a base for continued operations in Central Burma. The Commandos next, on Jan. 12, made landings at Myebon on the mainland to cut off the Japanese communications. This was followed by landings at Kangaw and then the islands of Ramree and Cheduba.

Further amphibious operations were made in February by the 25th Indian Division at Ru-Ywa

British Landings in Burma Set Trap on Rangoon



British troops have been landed on both banks of the mouth of the Rangoon River (1), twenty miles below Rangoon, to cut off the city from the sea and trap a Japanese force estimated at 30,000 that also is menaced by British and Indian troops that have advanced beyond Pegu (2) and are reported within thirty-six miles of the city on the north. British destroyers also destroyed ten small Japanese craft trying to cross Martaban Gulf to Moulmein.

paratroopers were dropped to clear the beach-heads following which, amphibious landings were made on both banks of the Rangoon estuary 20 miles south of the town. Against this tightening trap the Japanese on May 3 withdrew from Rangoon and fled to the northeast.

Gen. Slim's timing had been very nearly perfect, for the monsoon, disregarding forecasts, broke on May 1. The troops landed from the sea and proceeded through the city of Rangoon and out to the north where contact was made with the land attacking forces a few days later.

It was estimated that all that was left of the 28th Japanese Army was about 18,000 men who were cut off in the hilly jungle area of Pegu Yomas. In July an attempt was made to break out of this position by making for the area east of the Sittang River. However, the Allied forces were prepared for such a move with the result that about two-thirds of the Japanese force was killed or captured.

The recapture of Rangoon meant virtually the recapture of Burma. The port and the route to China were now completely in Allied hands.

The opening of the great pipeline to China, too, was a major step in the campaign. In this connection the following joint statement was released May 6 by Maj. Gen. W. E. R. Covell, U.S. Army, Comm. Gen., Services of Supply, India-Burma

Theater, and Maj. Gen. G. X. Cheves, U.S. Army, Comm. Gen., Services of Supply, China Theater on the pipeline bringing much-needed gasoline to China:

Gasoline for airfields, trucks, and similar military installations in the China Theater is now being transported over the world's longest pipeline, beginning at Calcutta, traversing the length of the Brahmaputra Valley to Assam, crossing the Patkai mountain range into Burma and then continuing over the hump of the Himalayas across the border into China.

Engineer Petroleum Distribution Companies of the Services of Supply, India-Burma Theater, with the help of Indian and Chinese labor, are at work on the pipeline and completed portions will materially increase combined tonnage over the Hump and the Stilwell Road, the route which it generally follows.

The pipeline, which largely depended upon the opening of a road between China and India, will help the U.S. Forces of both India-Burma and China Theaters in their mission of aiding the Chinese in the mutual struggle against the Japanese.

Between Feb. 1, 1944 and Apr. 30, 1945, the Japanese 15th, 28th, and 33d Armies had been wiped out. Adm. Mountbatten announced on May 5 that the Japanese casualties totalled 347,000, with 97,000 of these counted corpses.

The China Theater. In China, where 1945 marked the last half of the eighth and the beginning of the ninth year of continuous war with the Japanese Empire, the opening of the year saw a continuance of the Japanese successful efforts to clear the bases of the U. S. Fourteenth Air Force from the eastern portions of China. Suichwan, American air base east of the Japanese corridor from Hankow to Canton, was evacuated by the Fourteenth Air Force on Jan. 22. Two days later its defenders destroyed what installations they could and abandoned it to the Japanese.

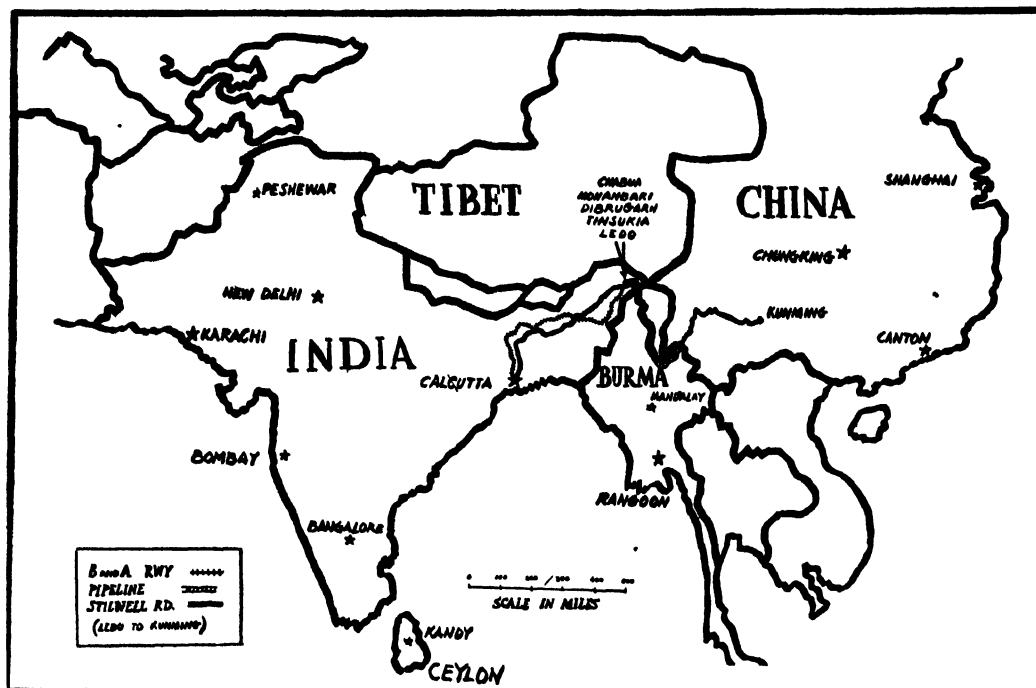
On Jan. 29 the air bases at Sincheng and Nanyang, south of Suichwan, also were abandoned by American air forces, while evacuation of the base at Kanchow followed the next day.

Kukong, Kwangtung capital, on the Canton-Hankow Railway, fell to the Japanese on Jan. 28 after most bitter fighting.

By these victories the Japanese cut in two the Chinese held area along the coast west of Hong Kong, and ran a Japanese path from Swatow northwest to Suichwan, slicing up the Chinese held area northeast of Hong Kong.

However, the picture was not all dark for the Allies, for the battle for supplies was showing definite improvement. In one month 46,000 tons of badly needed supplies were flown over the Hump. This represented more than three times the tonnage of Jan., 1944. Also the efforts of Chinese, British, and American troops and engineers in Burma were successful in reopening the overland supply route, so that on Jan. 28 the first convoy to China in almost three years arrived at Wanting over the Ledge-Burma Road, to which Generalissimo Chiang Kai-shek gave the name "Stilwell Road."

The increased supplies to China permitted a stepping up of the training program and the plans for reorganization of the Chinese combat forces. On Feb. 9 Chinese Army Headquarters were established in Kunming and General Ho Ying-chin was selected as commander in chief of the ground forces. Lieutenant General A. C. Wedemeyer, commander of the United States Forces in China and American Chief of Staff to Generalissimo Chiang Kai-shek, pointed out that Kunming, an important terminal for supplies from India, had been threatened by the Japanese and that its defense was imperative. The new disposition of Chinese forces was made with that end in view. Appointed to assist General Ho in the defense of this vital area were



THE BURMA AND ASSAM RAILWAY, THE PIPELINE, AND THE STILWELL ROAD

Major General Gilbert X. Cheves, U. S. Army, and Major General Claire Chennault, U. S. Army.

The city of Pingshek, above Canton, was recaptured by Chinese forces on Feb. 14, thus temporarily breaking the Japanese hold on the Canton-Hankow Railway. However, the victory was short-lived for the Japanese retook the town four days later.

After continuous fighting the Chinese forces succeeded in retaking Suichwan and its air base on Mar. 11.

On Mar. 22 the Japanese, from bases at Yen-cheng, Chumatiem and Kwangsi on the Peiping-Hankow Railway, and Loyang on the Lunghai Railway, opened attacks on Nanyant in Southern Honan from four directions. In northern Hupeh the Japanese drove toward Laohokow from Kingman with bitter fighting near Nanchang. Under this pressure the Fourteenth Air Force was again forced to abandon a base, evacuating Laohokow on Mar. 26.

Early in April the Chinese opened a counter-offensive in the Honan-Hupeh area. On Apr. 11 Japanese troops at Siangyang, Tzechung, Laohokow, Penghsien, Siuchwan, and Hsichiakou were attacked in concert with attacks by Chinese troops operating behind the lines. Next day the Chinese broke into the city of Laohokow, street fighting continuing all day until evening when the Japanese retreated toward Tenghsien. Also on the 12th Chinese troops occupied Miaotang, and Tseohshih.

In April and May the Japanese conducted a determined drive in western Hunan toward the city of Chihkiang, a base of the U. S. Fourteenth Air Force and the site of a large Chinese Army training center. On May 1 two Japanese spearheads were within 53 and 60 miles of the important center and Chinese troops were heavily engaged with columns coming west from Paoking and north from Chengpu. On May 2 Chinese forces under General

Ho Ying-chin recaptured the village of Wuyang, an important point because it straddles the road leading northward to the Paoching-Chickiang road and guards the entrance to a valley leading to the American air base at Chickiang.

The Japanese had early encircled Wukang, another important road center. But the Chinese garrison held out and after a siege of seven days Chinese forces on the outside fought through and relieved the beleaguered city. By holding despite the encirclement, the garrison of Wukang seriously hampered Japanese efforts to outflank the main Chinese defenses on the Paoching-Chihchiang road.

On May 10 the Chinese troops counterattacked along the entire front in the Hunan Province, driving north and northeast in the wake of retreating Japanese. Other columns from the Wawutang area reached positions close to the important road town of Tungkou. On May 13 the Chinese ground forces recaptured Tungkou, encircling a large body of Japanese troops southeast of the town and a smaller force north of Tungkou near Shanmen. Farther east on the road, Chinese forces, which had cut behind the Japanese positions in the Tungkou area, arrived at the outskirts of Taohuaping, only 40 kilometers west of the main Japanese base at Paoching.

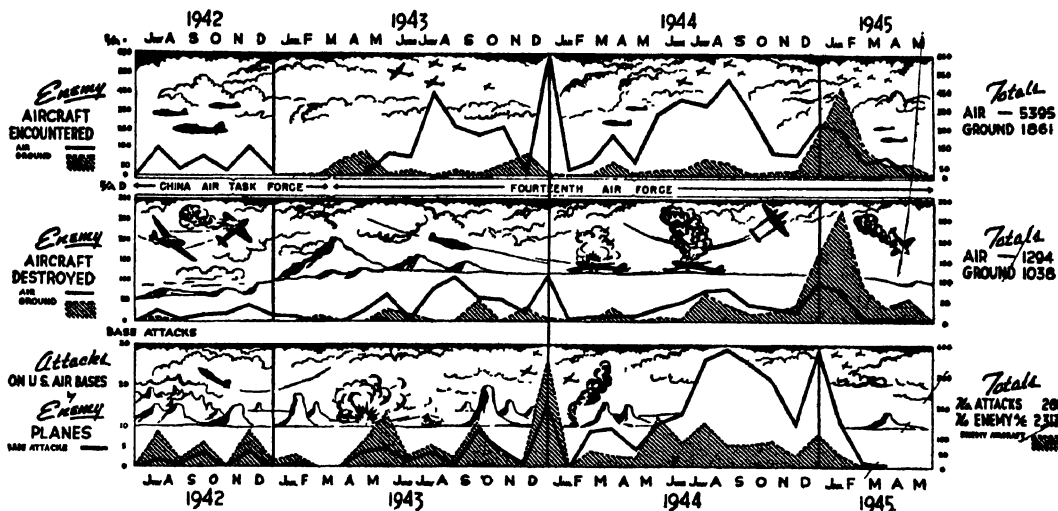
By the end of the month Japanese troops in western Hunan had been pushed back to 15 to 20 kilometers west of Paoching. Hsinning was in Chinese hands while some Japanese remnants west and south of the city were being cleaned up.

Summarizing the results of the Western Hunan Campaign, Major General Kung Chi-kuang announced on June 2 that between Apr. 9 and May 28 the Chinese inflicted 28,000 casualties on the Japanese, took 15,000 Japanese officers and 230,000 enlisted men prisoners, captured 1,496 rifles, 100 machine guns, 24 artillery pieces and large quantities of supplies.

HOW ARMY AIR FORCES CLEARED CHINA'S SKIES

4 JULY 1942 to 4 JULY 1945

PREPARED BY P.R.O. 14TH AF FROM DATA COMPILED BY 24TH SCU 14TH AF - 1 JULY 1945



THE XIVth AIR FORCE'S WORK OVER CHINA

It was later revealed that the American-trained and equipped Chinese New Sixth Army, veterans of the north Burma campaign, had been moved into the Chihchiang area of western Hunan during the defense of that air base. Most of the men and animals were flown into the area by the U. S. Air Transport Command.

In the southern Kwangsi province the Chinese had been engaged in a determined campaign against Nanning, former American air base which had been evacuated Nov. 20, 1944. The area was strategically important because of its being a terminal point for traffic westward on the West (Yu) River from Canton and Hong Kong and also as a junction point on the main road connecting French Indo-China and Japanese forces in Central China.

Nanning was entered by Chinese troops on May 26 and by the next morning was completely in Chinese hands with the Japanese withdrawing in two columns, one going northeast toward Pinyang and the other southwest toward Suifu.

Other forces had been engaged in the recapture of the coastal port of Foochow, which had frequently been mentioned as a possible landing spot for American forces. The main attack on this Fukien front was launched on the morning of May 10. One column broke through Japanese positions northwest of the city and entered Foochow city May 11, another column taking the airfield south of the city. Street fighting was in progress day and night. Within a few days the Japanese received reinforcements from Lienkong and Mamoi, so that on the night of May 13 the Chinese were forced out of the city. Fighting continued on the outskirts of Foochow with the Chinese again forcing an entry to the city on May 19 and driving the Japanese out. The Japanese withdrew to the north pursued by the Chinese troops. Meanwhile the Japanese landed troops at Saipu to relieve the forces retreating from Foochow. The landing parties were heavily engaged by Chinese militiamen, but were successful in taking Saipu. The town was not held for long, however, for the victorious Chinese Army drove north from Foochow and retook the port.

Further to the north, on the Chekiang Coast, there was another center of activity as the Chinese recaptured Pingyang, south of Yungkia on June 13. June 18 Chinese forces recaptured Wenchow, coastal port which had been occupied by the Japanese for nine months. Located at the mouth of the Wukiang, Wenchow had been captured by the Japanese on three different occasions since the outbreak of the war.

June's greatest activity centered in the south province of Kwangsi. The principal prize sought here was the ancient walled city of Liuchow, former Fourteenth Air Force Base, which had fallen to the Japanese in November of 1944. Its importance lay in its strategic locality which permitted effective operation of aircraft against Japanese troop routes and supply lines around Canton and Hong Kong. It was also an important rail and road center with rail routes running northeast to Kweilin and to Hengyang, northwest to Kweiyang and south nearly as far as Laipin.

Ishan, an outer defense bastion of Liuchow, the scene of bitter fighting, was taken by the Chinese on June 10, retaken by the Japanese the next day only to fall into Chinese possession again on June 14, the Japanese defenders withdrawing to the southeast along the road to Tatang. On June 23 units of the Chinese forces crossed the Yungkiang and captured Tatuchen, 13 kilometers north of Liuchow, by which time other Chinese forces were fighting in the western suburbs of Liuchow, north of Liuchow. Capture of Liuchow was announced on June 30, simultaneously with announcement of the reoccupation of Linhai on the China coast.

Chinese victories continued on through July. On the 15th the former American airfield at Kanshien, 250 miles north of Hong Kong, was retaken, giving the Fourteenth Air Force an advanced base from which to cover the China coast. Meanwhile Chenghsien in Chekiang province, 117 miles south of Shanghai and 59 miles southeast of Hangchow, was captured.

Namyung, also a former air base for the Fourteenth Air Force, was taken by the Chinese a few

days later. Yangso was recaptured July 24. Kweilin, 45 miles north, another former American airfield, was the target of the next Chinese attack.

Pinglo, Japanese supply base in south central China and long a target for American bombing attacks, was reoccupied by Chinese troops the end of July, while other units were thrown against the former U. S. airfield at Lingliang, 370 miles south-east of Chungking.

As the fighting part of the war neared its end the Chinese captured the South China port of Geung-kong west of Hong Kong and drove on toward Canton.

On Aug. 8 Soviet Russia declared war against Japan and the next day launched an attack in great force into Manchuria. With tanks in the lead the far eastern forces of the Red Army bore into the Japanese held territory, gaining 105 miles the second day. In Korea, Russian Marines took the port of Rashin while other units landed on Karafuto, the Japanese southern half of the island of Sakhalin.

Under Marshal Vasilevsky, the Red Army operations lasted until Aug. 19, after which resistance ceased and Soviet troops were able to take towns merely by marching into them. Port Arthur and Dairen were taken by parachute troops. A Soviet

the Tenth and the Fourteenth Air Forces. Maj. Gen. Claire Chennault, U.S. Army, whose work in China dated back to the organization of the American Volunteer Group of "Flying Tigers" before our entry into the War, and was first commander of the Fourteenth Air Force when we entered the War, asked to be relieved. His request was granted and he was transferred back to the United States for retirement.

Also active in the China theater was a group of U.S. Naval, Marine Corps, and Coast Guard personnel under Rear Admiral Milton E. Miles, U.S. Navy, who was commander, Naval Group China, and Deputy Director of the Sino-American Cooperative Organization. This group directed the gathering of meteorological data for use in forecasting weather over the Pacific and also gave arms and instruction in combat to more than 25,000 Chinese guerrilla troops.

United States Army casualties in Asia, including India, Burma, and China, totalled 6,020, of which 2,303 were killed, 2,437 wounded, 845 missing, and 435 taken prisoners.

The order of battle of United States Forces in the China Theater as of Aug. 14, 1945 (from General Marshall's report) was:

<i>Unit</i>	<i>Commander</i>	<i>Location</i>
Headquarters, U. S. Forces, China Theater.	Lt. Gen. A. C. Wedemeyer	Chungking, China.
U. S. Army Air Forces, China Theater	Lt. Gen. G. E. Stratemeyer	Chungking, China
Tenth Air Force	Maj. Gen. H. C. Davidson	Luichow, China.
Fourteenth Air Force	Maj. Gen. C. B. Stone, 3d	Kunming, China.

communiqué of Sept. 10 summed up the campaign as follows:

"In the far East our army and navy from Aug. 9 to Sept. 9, 1945, inflicted the following losses on the enemy in manpower and equipment:

"The following were captured: 925 planes, 369 tanks, thirty-five armored cars, 1,226 field guns including self-propelled, 1,340 mortars, 4,836 machine guns, about 300,000 rifles, 133 radio transmitters, 2,300 trucks, 125 tractors and haulage tractors, 17,497 horses, 742 stores of ammunition, arms, equipment and provisions.

"More than 594,000 Japanese officers, and men and 148 generals surrendered to our troops, including about 20,000 wounded. The Japanese lost in killed alone more than 80,000 officers and men.

"Thus, the total Japanese losses in men, excluding crews of sunken Japanese ships, amount to more than 674,000 officers and men killed or captured.

"The ships and troops of the Pacific Fleet in the same period sank the following Japanese ships and vessels: two destroyers, twenty-eight transports, three tankers, five motor launches, twelve barges and schooners.

"For the same period the losses of our troops in the Far East were 8,219 men killed and 22,264 wounded."

At the time of the Japanese surrender plans had been completed for campaigns against Hong Kong and Canton to provide the Allies with good port facilities for strengthening the supply lines to China. The offensive was to have opened Aug. 18, but the Japanese announced their acceptance of the terms of the Potsdam Declaration on Aug. 14.

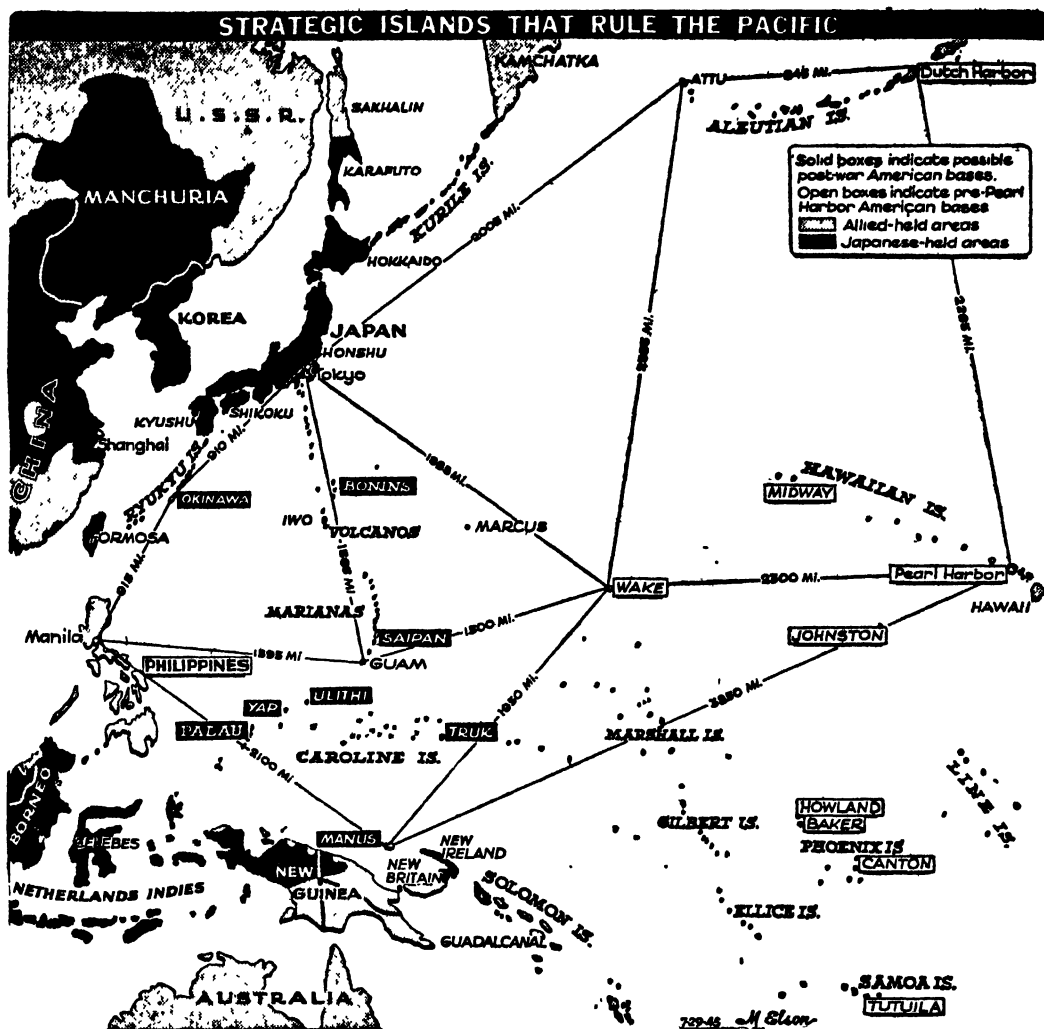
The American Air Forces played a great part in the campaigns in China, both the combat planes in bombing and strafing the Japanese and the Air Transport Command in bringing supplies and aiding in the transporting of troops and material. When the situation in Burma eased up, the United States moved its Tenth Air Force into China and made Lieutenant General G. E. Stratemeyer, U.S. Army, commanding general of Army Air Forces in the China theater, which command included both

Pacific. In the vast Pacific Theater attention at the beginning of the year was centered on the campaign in the Philippines, where the forces of General of the Army Douglas MacArthur were well established on the islands of Leyte and Samar and where a force of two regiments, landing without opposition, was set up on Mindoro.

On Jan. 9, the Sixth U. S. Army, Gen. Walter Krueger commanding, composed of the I and XIV Corps, under Maj. Gen. Innis P. Swift and Lt. Gen. Oscar W. Griswold, respectively, landed on the beaches of Lingayen Gulf on the island of Luzon. The Eighth Army under Lt. Gen. Robert L. Eichelberger having taken over the battle on Leyte, the Sixth Army had been quickly assembled and had sailed through the Mindanao and Sulu Seas and up the west coast of Luzon to catch the Japanese defenders unprepared and off balance, because of diversionary feints made concertedly by Philippine guerrilla forces and by elements of the Far Eastern Air Force under Gen. G. C. Kenney.

The Luzon Attack Force totalled more than 850 ships under the command of Vice Adm. Thomas C. Kinkaid, and was divided into the Lingayen Attack Force, under Vice Adm. Theodore S. Wilkinson, which landed the XIV Corps, and the San Fabian Attack Force, under Vice Adm. David E. Barbey, which landed the I Corps, a reinforcement group under Rear Adm. Richard L. Conolly, a fire support and bombardment group under Vice Adm. Jesse B. Oldendorf, and surface and air covering groups under Rear Adm. Russell S. Berkey and Rear Adm. C. T. Durgin.

Immediately the Sixth Army Forces, their beachhead established and flank protected, struck out for Manila. Meanwhile the XI Corps, under Lt. Gen. C. P. Hall, landed near Subic Bay, also taking the Japanese by surprise, and moved across the neck of land denying them entry to the Bataan peninsula. Two days later the 11th Airborne Division was landed from ships at Nasugbu south of Manila, one regiment moving immediately to Gagaytay ridge overlooking Cavite. From the northeast the First Cavalry Division approached the



STRATEGIC MAP OF THE PACIFIC ISLANDS

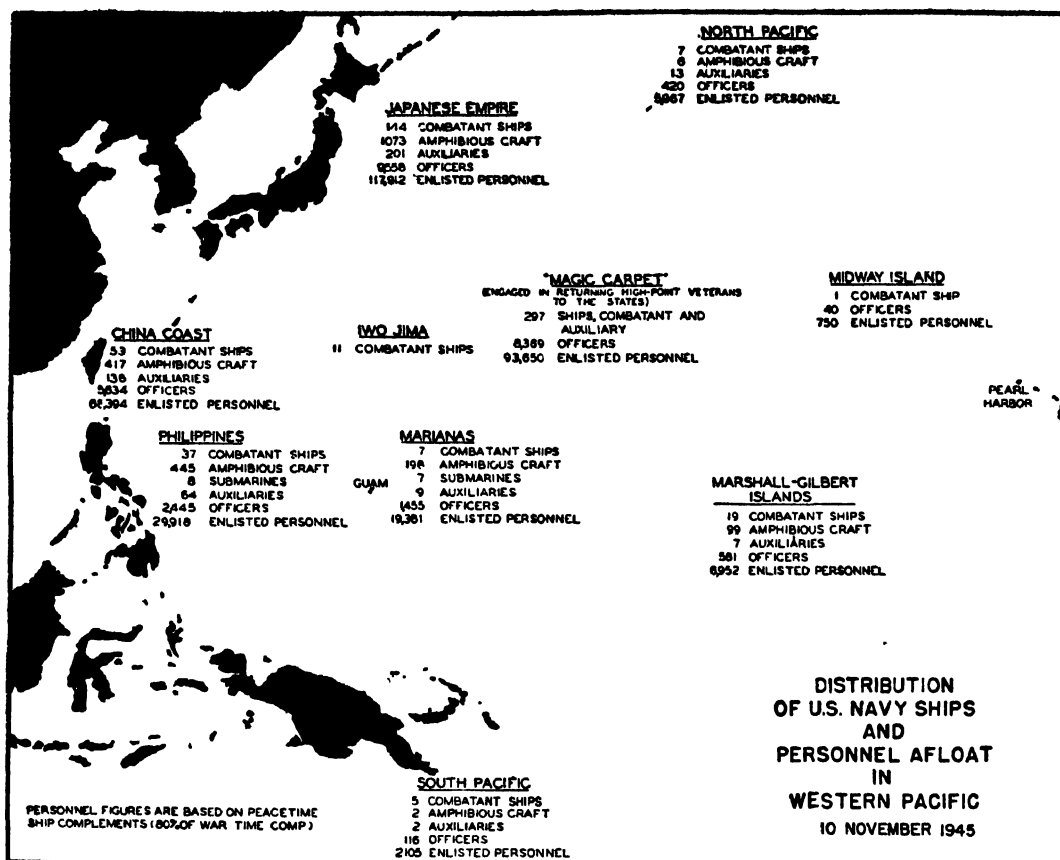
(N. Y. Times)

outskirts of Manila on Feb. 3. Three days later men from the airborne units were at Nichols Field. The net tightened; Sixth Army troops beat at the gates of Manila from every direction, while the Japanese organized a bitter defense for the city, 20,000 naval troops converting it into a fortress. After bloody house-to-house fighting, with the Japanese destroying much of the city, organized resistance was declared at an end on Feb. 23 and Manila was again in American hands.

While this fighting was in progress, another fierce struggle was under way for the possession of Corregidor, the key to Manila Harbor. Here the Far Eastern Air Force had pounded heavily in preparation for the landing, on Feb. 16, of the 503d Parachute Regiment from the air while the 34th Infantry Regiment came ashore on the rock from assault boats. The battle on Corregidor lasted for two weeks until the remaining Japanese, holed out in the underground passages, blew themselves up. It is estimated that 4,215 Japanese were killed in the fighting and an unknown number blown up. Of the American force of 3,038, only 136 were killed, eight missing, and 531 wounded. These operations made possible the opening of Manila Bay.

During this period forces of the U. S. Pacific Fleet were busy neutralizing such Japanese installations as might have offered interference with the operation. The Third Fleet, under Adm. William F. Halsey, U. S. N., and a fast carrier task force under Vice Adm. John S. McCain, U. S. N., launched air attacks against Formosa, the southern Nansei Shoto, and upon Luzon itself prior to the landings, while on Jan. 9, the day of the landing, the Third Fleet fast carrier task force hit Formosa air bases, cutting down enemy opposition from that point and at the same time sinking 15 Japanese ships and damaging 58 others.

Continuing its work, U. S. Pacific Fleet forces struck shipping and other targets along the French Indo-China coast on Jan. 11 sinking 41 ships, damaging 28, destroying and damaging a total of 162 airplanes, and smashing docks, oil tanks, and refineries in the Camranh Bay and Saigon areas. Hong Kong, Canton, Hainan, Amoy, Swatow, and other key points subsequently were struck at will by the Third Fleet. During this sweep of 3,800 miles U. S. Fleet vessels suffered no battle damage, and no Japanese aircraft was able to get within 20 miles of the fast carrier task force.



FLEET FORCES IN THE PACIFIC

At the end of February, a force of cruisers and destroyers under Rear Adm. R. S. Riggs bombarded Puerto Princesa on Palawan, following which elements of the 41st Division of the Eighth Army made an unopposed landing, taking two airstrips which provided control of a considerable area of the China sea on the Japanese route to Malaysia and Burma.

Throughout this period the Eleventh Air Force, Fleet Air Wing Four, and other elements of the North Pacific Force under Vice Adm. Frank Jack Fletcher, U. S. N., were beating at Japan's northern Kurile Islands with rockets, aerial bombs, and naval gunfire. Flights even penetrated the Sea of Okhotsk to bomb and strafe garrisons on Araidō and along Kakumabetsu Bay on Paramushiro's west coast.

On Feb. 19 the V Amphibious Corps, under Maj. Gen. Harry Schmidt, U. S. Marine Corps, supported by the Fifth Fleet under Adm. R. A. Spruance, stormed the beaches on the little island of Iwo Jima, opening one of the toughest and most costly of battles up to that time. Possession of this island was considered necessary for the prosecution of the war because of the great value it would be in pushing the B-29 attacks against the Japanese mainland. Iwo Jima would neutralize the Japanese naval and air bases at Chichi Jima and Haha Jima, from whence aerial attacks were being launched against U. S. B-29 bases in the Marianas. Furthermore, while not large enough for a main B-29 base, it would afford a haven for crippled or battle-weary Superfortresses on the return trip from Japan and

would enable fighter planes to accompany the big bombers on the final lap of their voyage. Also it put U. S. rocket-firing fighters and medium bombers within range of industrial centers in Japan.

First to go ashore were the 4th and 5th U. S. Marine Divisions, under Maj. Gen. Clifton B. Cates and Maj. Gen. Keller E. Rockey, respectively. On the third day the 3d Marine Division, under Maj. Gen. G. B. Erskine, moved into the line. The pre-invasion assault by a huge naval force under Rear Adm. W. H. P. Blandy, and by aerial bombardment from land-based aircraft, had destroyed some of the island's defenses, coast defense guns, anti-aircraft guns, covered artillery emplacements, blockhouses, pillboxes, etc. Nevertheless, so well fortified had been the island that its defenses inland appeared largely intact. Motoyama Airfield No. 1 was captured Feb. 20, the extinct volcano of Mount Suribachi was stormed and taken Feb. 23, and Motoyama Airfield No. 2 occupied on the 25th. In 27 days, from Feb. 19 to Mar. 17, our losses were 4,189 killed and 15,749 wounded, while according to U. S. figures the Japanese lost 21,000 killed and 1,259 prisoners.

On Mar. 14, while the remaining Japanese forces in the northern part of the island were still being cleaned out, the American flag was officially raised over the island and a proclamation issued by Fleet Adm. Chester W. Nimitz, U. S. N., was read, suspending all powers of government of the Japanese Empire on the island. Maj. Gen. James E. Chaney, U. S. Army, was appointed Island Commander and

Brig. Gen. Ernest M. Moore, commanding general of the VII Fighter Command of the Seventh Air Force, was assigned as commander of the aircraft of all services based on Iwo.

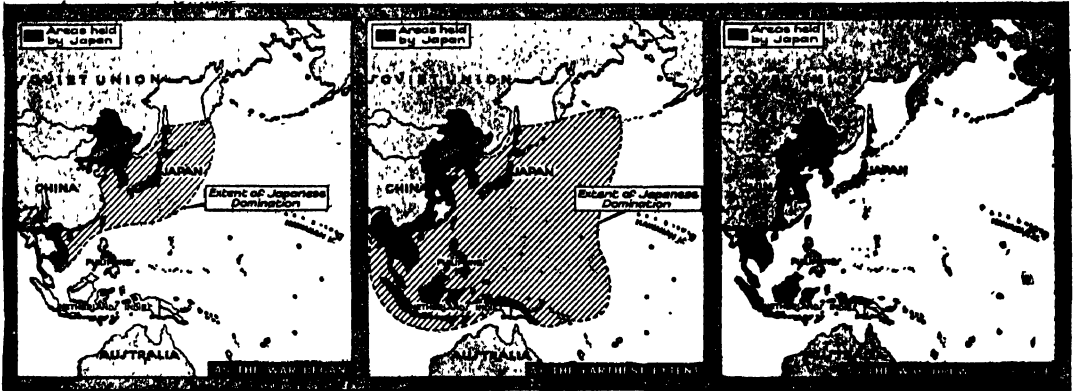
By the end of the war approximately 3,000 B-29's had landed on Iwo Jima, without which haven many of the big bombers and their valuable trained crews would have been lost.

Simultaneously with the pre-invasion attack on Iwo carrier aircraft of the U. S. Fifth Fleet were attacking Tokyo, giving strategic cover to the operations against the island. The attack, highly successful, was carried on for two days, during which 322 Japanese aircraft were shot down and 177 destroyed on the ground, while the U. S. fleet lost 49. Vessels were sunk in the harbor, installations at airfields destroyed, and the Ota aircraft factory and the Musashine Tama and Tachigawa engine plants struck. On Feb. 25 a fast carrier task force under Vice Adm. Marc A. Mitscher hammered at the Tokyo area again, destroying 158 airplanes and five small vessels against the loss of nine fighter planes.

On Apr. 1 the great amphibious assault on the Japanese island of Okinawa in the Ryukyus opened. Planning for this operation was carried on concurrently with that for Iwo Jima, the dates being so close together. As in the case of Iwo Jima the over-all direction was in the hands of Fleet Adm. Chester W. Nimitz, Commander in Chief U. S. Pacific Fleet and Pacific Ocean Areas, with Adm. Raymond A. Spruance, commander of the Fifth Fleet, as officer in command, and Adm. R. K. Turner, commander of Amphibious Forces Pacific, in command of the Joint Expeditionary Force.

It was the largest amphibious operation up to that time in the Pacific, both as to numbers of troops and numbers of ships. Altogether there were employed about 1,400 vessels, from battleships down to small landing craft. These were used directly in the capture of Okinawa and do not include those of the Fifth Fleet which were keeping other Japanese under attack to prevent interference with the operations.

The landing force was the newly organized Tenth U. S. Army under command of Lt. Gen. Simon



THE RISE AND FALL OF JAPAN'S EMPIRE OF CONQUEST

(N. Y. Times)

Meanwhile, in the Philippines General MacArthur's forces continued to take territory from the Japanese. Troops of the 41st Division landed on Mindanao on Mar. 10 and took the city of Zamboanga, starting a struggle that lasted for many weeks. Also during March troops were landed on Panay, Cebu, and Negros, while on Luzon, although the central portion was securely in U. S. hands, heavy fighting continued in the mountain ranges between Baguio and Balete Pass.

A British task force under Vice Adm. Sir Bernard Rawlings, with aircraft carriers commanded by Rear Adm. Sir Philip Vian, made a strike, late in March, against the Sakashima Islands in the Nansei Archipelago which stretches some 600 miles between Formosa and Japan. These Islands are about 200 miles south of the Okinawa group which had been the target of repeated attacks by the U. S. Fleet a week earlier.

On the 19th and 20th of March Adm. Mitscher's fleet struck the Japanese Fleet at its home bases in the Inland Sea with dire results. More than 475 Japanese airplanes were destroyed, six freighters sunk, and damage inflicted on one or two battleships, two of three aircraft carriers, two light carriers, two escort carriers, one heavy cruiser, one light cruiser, four destroyers, one submarine, one destroyer escort, and seven freighters. In addition a large number of installations including hangars, shops, arsenals, and oil storage facilities were destroyed.

Bolivar Buckner, Jr., U. S. Army, and composed of Army, Navy, and Marine Corps personnel. Main components of the Tenth Army were the XXIV Army Corps and the III Amphibious Marine Corps, which included the 7th, 27th, 77th, and 99th Infantry Divisions of the Army, and the 1st, 2d, and 6th Marine Divisions, with strong air forces attached. Altogether the Tenth Army approximated 200,000 fighting men.

Beginning Mar. 19 and continuing until the 23d, the Fifth Fleet, with a fast carrier force, covered other bases in the Ryukyu Islands, Kyushu, and the Inland Sea, hitting at Japanese naval and air bases from which they might oppose the Okinawa operations. Next a methodical naval shelling and air bombardment of Okinawa was undertaken to "soften it up" for the landing. On the 26th of March the 77th Division was put ashore on Kerama Retto, 20 miles west of the southern end of Okinawa. A defending force of about 900 Japanese was quickly overcome and squadrons of Marine Corps fighter planes were brought to air fields on the island from whence they could cover the Okinawa landing. The Kerama Retto also served as a naval anchorage. On Mar. 30 units of the 77th Division took Keise Shima where the 420th Field Artillery Group, equipped with 155-mm guns, was employed to support the invasion.

At 8:30 A.M. Apr. 1 the troops went ashore in the bay on the west side of the island just north of Naha, the principal city. They landed abreast along

an eight-mile stretch of beach with the Marine Corps to the north and the Army to the south. There was little initial resistance so that by noon both the Kadena and Yontan airfields had been taken. By the end of the day about 50,000 troops had landed, with large amounts of artillery and tanks.

The Japanese commander, Lt. Gen. Ushijima, with a combat force of about 70,000 men at his disposal, and more than 500 artillery guns of 75-mm or greater in caliber, wisely decided not to give major resistance to the landings, but to concentrate most of his effective force in the southern portion of the island, in such a position that there would be no suitable shores for landings behind them. The island was superbly fortified, with gun emplacements and with caves connected by intercommunicating tunnels. Heavy guns were shot from the mouths of the caves and then withdrawn. The effectiveness of their fire indicated that the defending troops were well trained and seasoned.

After landing, the Marine Corps turned north and the Army corps south. The large north end of the island, not being so strongly held, was rapidly cleaned up by the Marines. This phase of the campaign while swift (it was completed by Apr. 21) was marked by long, fast marches over rocky mountains, and difficult fighting against the Japanese entrenched in the mountain range of the Motobu peninsula.

On May 1 the 1st Marine Division was moved into the line in the south, where fighting had been at a high pitch and progress very slow against formidable Japanese strongholds. Early in May the Japanese launched a determined counterattack accompanied by two amphibious attacks of about 2,000 men each on the flanks of the American line. Meanwhile Gen. Buckner shifted the divisions in his line so that when the Japanese struck they found two fresh divisions (the 1st Marine and 96th Infantry) facing them. The counterattack failed, the amphibious forces being met by amphibious tanks and naval fire, those reaching the shore being killed, while massed artillery and tanks inflicted severe casualties on the Japanese 24th Division and 44th Independent Mixed Brigade. The United States forces reported losses of about 2,000 men.

Following this battle the 6th Marine Division was brought south and put into the line. Four Divisions now faced the remaining elements of the Japanese 32d Army along the six mile Shuri front. On May 13 the 96th Infantry Division took the crest of Conical Hill and opened a path to the south to outflank Shuri. Through this corridor Gen. Buckner sent the 7th Infantry Division, which promptly overran Yonabaru. A movement west behind Shuri and Naha would have trapped the Shuri defenders, but just at this time a terrific wind and rain storm blew up, churning the earth into a sea of mud and bogging down all heavy equipment and transportation, so that it took the utmost efforts of the engineers to keep even the most vital traffic moving. Supplies were brought in by sea and by air drop because of the condition of the ground. Taking advantage of this situation, the Japanese, having failed in a counter attack against the west of the line, withdrew from the untenable Shuri position.

The weather improved in June, permitting armored vehicles to move so that the attack was renewed all along the line. Caves were reduced with flame-throwing tanks and dynamite squads. On June 19 elements of the Marine Corps reached the southern coast of the island while the 7th Infantry Division captured the command post of the Japanese 32d Army. On June 22 the Island was de-

clared secured, although small groups of Japanese continued to fight for some time.

Gen. Buckner did not live to see the ultimate victory, for on June 18, while forward with the assault infantry, he was killed by artillery fire. Maj. Gen. Roy S. Geiger, U.S.M.C., took over command of the ground forces on the island until the arrival of Gen. Joseph W. Stilwell, U. S. Army, who assumed command of the Tenth Army and the Ryukyu Forces on June 23.

While the ground fighting had been in progress the supporting naval forces were the targets of determined attacks from Japanese suicide boats and particularly Kamikaze planes. Between the first Japanese air attack on Mar. 24 and the conclusion of organized resistance on the Island, 223 naval vessels of all types had been hit by air attack, most of them by the Kamikazes. In the list of vessels damaged there were ten battleships, eight aircraft carriers, two light aircraft carriers, three escort carriers, three heavy cruisers, two light cruisers, and 67 destroyers. A total of 30 vessels were sunk, the largest in the regular combatant classes being 12 destroyers. Hardest hit were the destroyers and small vessels stationed in a picket line far enough out to give the main body of heavy ships warning of the approach of Japanese planes. While they suffered heavy losses, these picket boats undoubtedly lessened the severity of the attacks upon the other vessels.

The Japanese lost 3,836 airplanes shot down during the campaign and 800 destroyed on the ground.

According to United States figures the Japanese lost 107,539 killed and 7,401 taken prisoners. Of the U.S. Army troops engaged 4,549 were killed, 18,010 wounded, and 95 missing. The Marines lost 2,734 killed, 13,388 wounded, and 143 missing. Losses at sea because of air attacks, mines, torpedoes, etc., totalled 4,907 killed and missing and 4,824 wounded. In addition to these battle casualties the Army suffered 21,592 non-battle casualties and the Marine Corps 10,881. These non-battle casualties include injuries, combat fatigue, etc.

Meanwhile, the surrender of Germany on May 8 had freed for possible deployment to the Pacific Theater a total of about 4,500,000 Allied soldiers. How many of these would be sent against her Japan had no way of knowing.

The operation of the very heavy bombers (B-29 Superfortresses) against Japan was steadily growing. On Mar. 10 a campaign of heavy incendiary bombing was started. On May 31 the War Department announced a list of 43 specific war industry factories in Tokyo, Nagoya, Osaka, and Kobe which had been attacked. In addition hundreds of small plants had been hit, dockyards shattered and transportation centers bombed. Between Mar. 1 and May 30 B-29's had dropped approximately 58,000 tons of bombs on Japanese targets. An estimate based on analysis of photographs indicates the following urban areas destroyed:

Tokyo	51.3 square miles
Nagoya.....	11.3 square miles
Kobe.....	3 0 square miles
Osaka	8.1 square miles

In the latter part of May and early June operations were conducted against Borneo to deny the Japanese access to their conquered territories in the Netherlands East Indies. A Borneo attack force, composed of Australian and American vessels, under command of Vice Adm. D. E. Barbey, U.S.N., conducted the operations, with the 9th Australian Division providing the landing force. Landings

were made on the island of Tarakan and at Brunei Bay in northwest Borneo. On Borneo the Australians proceeded south to the oilfields at Seria and Miri. Air and naval facilities were provided at Brunei Bay giving the Allies even greater coverage of the Asiatic coast from Singapore to Shanghai.

In the Philippines, the forces of General MacArthur had been steadily driving the Japanese into corners. On Luzon the 37th Division had gone north from Balete Pass into the Cagayan Valley. On June 21 Aparri was taken by guerrilla forces assisted by Sixth Army Rangers. Two days later the 11th Airborne Division dropped a force south of Aparri, which, within three days, had joined the forward elements of the 37th Division. On June 28 General MacArthur announced that all Luzon had been liberated.

Meeting at Potsdam, representatives of the United States, Great Britain, and China on July 26 issued an ultimatum calling upon Japan for unconditional surrender, failing in which, they said she would face "utter destruction."

As if in fulfillment of this threat the first atomic bomb to be used in combat was dropped on the city of Hiroshima on Aug. 6. Sixty percent of the city was destroyed. On Aug. 8 the Soviet Union declared war on Japan and moved across the border into Manchuria. On Aug. 9 the second atomic bomb was loosed on Nagasaki. The next day the Japanese Government announced it would accept the Potsdam terms providing that they would not be construed to "comprise any demand which prejudices the prerogatives of His Majesty as a Sovereign Ruler." This was what the Allies had hoped for, for

through the Emperor they believed they could control and disarm the large bodies of Japanese troops on the Asiatic mainland and outlying islands. They replied, therefore, that "from the moment of surrender the authority of the Emperor and the Japanese Government to rule the state shall be subject to the Supreme Allied Commander who shall take such steps as he deems proper to effectuate the surrender terms." On Aug. 14 the Japanese announced acceptance of the Potsdam Declaration in an Imperial Rescript, in which it was stated that "the enemy has begun to employ a new and most cruel bomb, the power of which to do damage is indeed incalculable, taking the toll of many innocent lives. Should we continue to fight, it would not only result in an ultimate collapse and obliteration of the Japanese Nation, but also it would lead to the total extinction of human civilization."

General Douglas MacArthur, U.S. Army, was appointed Supreme Commander for the Allied Powers and conducted the arrangements for the formal surrender ceremonies which were held on board the United States Battleship *Missouri* in Tokyo harbor Sept. 2. In accordance with the terms the Emperor of Japan issued a proclamation instructing his subjects to cease hostilities, lay down their arms, and carry out the provisions of the surrender document. In obedience to these instructions bodies of Japanese troops in China, Formosa, Manchuria, and many islands in the Pacific ceased fighting and submitted to the directions of Allied Commanders.

The Order of Battle for U. S. Army Forces in the Pacific, as of August 14, as given in the report of General of the Army Marshall follows:

Unit	Commander	Location
General Headquarters, U. S. Army Forces in the Pacific.	General of the Army Douglas MacArthur	Manila, Luzon, Philippine Islands.
Sixth Army	Gen. Walter Krueger	Luzon, Philippine Islands.
40th Infantry Division	Brig. Gen. D. J. Myers	Panay, Philippine Islands.
11th Airborne Division	Maj. Gen. J. M. Swing	Luzon, Philippine Islands.
I Corps	Maj. Gen. I. P. Swift	Luzon, Philippine Islands.
26th Infantry Division	Maj. Gen. C. L. Mullins	Luzon, Philippine Islands.
33d Infantry Division	Maj. Gen. P. W. Clarkson	Luzon, Philippine Islands.
41st Infantry Division	Maj. Gen. J. A. Doe	Mindanao, Philippine Islands.
IX Corps	Maj. Gen. C. W. Ryder	Leyte, Philippine Islands.
77th Infantry Division	Maj. Gen. A. D. Bruce	Cebu, Philippine Islands.
81st Infantry Division	Maj. Gen. P. J. Mueller	Leyte, Philippine Islands.
XI Corps	Lt. Gen. C. P. Hall	Luzon, Philippine Islands.
43d Infantry Division	Maj. Gen. L. F. Wing	Luzon, Philippine Islands.
American Infantry Division	Maj. Gen. W. H. Arnold	Cebu, Philippine Islands.
1st Cavalry Division	Maj. Gen. W. C. Chase	Luzon, Philippine Islands.
Eighth Army	Lt. Gen. R. L. Eichelberger	Leyte, Philippine Islands.
93d Infantry Division	Maj. Gen. H. H. Johnson	Morotai Island, New Guinea, and Philippine Islands.
96th Infantry Division	Maj. Gen. James L. Bradley	Okinawa, Ryukyus Islands, and Mindanao, Philippine Islands.
X Corps	Maj. Gen. F. C. Sibert	Mindanao, Philippine Islands.
24th Infantry Division	Maj. Gen. R. B. Woodruff	Mindanao, Philippine Islands.
31st Infantry Division	Maj. Gen. C. A. Martin	Mindanao, Philippine Islands.
XIV Corps	Lt. Gen. O. W. Griswold	Luzon, Philippine Islands.
6th Infantry Division	Maj. Gen. C. E. Hurdie	Luzon, Philippine Islands.
32d Infantry Division	Maj. Gen. W. H. Gill	Luzon, Philippine Islands.
37th Infantry Division	Maj. Gen. R. S. Beightler	Luzon, Philippine Islands.
38th Infantry Division	Maj. Gen. F. A. Irving	Luzon, Philippine Islands.
Tenth Army	Gen. J. W. Stilwell	Okinawa, Ryukyus Islands.
XXIV Corps	Lt. Gen. J. R. Hodge	Okinawa, Ryukyus Islands.
7th Infantry Division	Maj. Gen. A. V. Arnold	Okinawa, Ryukyus Islands.
27th Infantry Division	Maj. Gen. G. W. Griner, Jr.	Ie Shima and Okinawa, Ryukyus Islands.
U. S. Army Forces, Middle Pacific	Lt. Gen. R. C. Richardson, Jr.	Oahu, Hawaiian Islands.
98th Infantry Division	Maj. Gen. A. M. Harper	Oahu, Hawaiian Islands.
U. S. Army Forces, Western Pacific	Lt. Gen. W. D. Styer	Luzon, Philippine Islands.
Far East Air Forces	Gen. G. C. Kenney	Okinawa, Ryukyus Islands.
Fifth Air Force	Lt. Gen. E. C. Whitehead	Okinawa, Ryukyus Islands.
Seventh Air Force	Brig. Gen. T. D. White	Saipan, Marianas Islands.
Thirteenth Air Force	Maj. Gen. P. B. Wurtsmith	Leyte, Philippine Islands.

ORDER OF BATTLE U. S. ARMY STRATEGIC AIR FORCES (AS OF 14 AUGUST 1945)

Headquarters, U. S. Army Strategic Air Forces, Guam, Marianas Islands:	
Commanding General	Gen. Carl Spaatz.
Deputy Commander	Lt. Gen. B. McK. Giles.
Chief of Staff	Maj. Gen. C. E. LeMay.
Eighth Air Force, Okinawa, Ryukyus Islands:	
Commanding General	Lt. Gen. James H. Doolittle.
Twentieth Air Force, Guam, Marianas Islands:	
Commanding General	Lt. Gen. Nathan F. Twining.

Occupation of Japan. From headquarters in Tokyo, General MacArthur set about the task of fulfilling the assignment given to him—to establish a peaceful and responsible government, preferably democratic, in Japan and to see to it that she will not again be a threat to the United States or to the peace of the world.

His task apparently was simplified by the co-operation of the Emperor and the people of Japan, many of whom seemed to welcome him and the regime he represented. One of his first moves was to order the closing of her foreign ministry and her embassies and consulates in other countries.

The Eighth Army, under Lt. Gen. Eichelberger, with added units including those from the Marine Corps, occupied the principal points of the Japanese main islands, while naval detachments and vessels took control of the harbors. In effecting the military occupation there was no opposition and no disorder.

The U. S. forces were required to destroy Japanese fortifications, to maintain law and order, and to dispose of great quantities of Japanese property in the home islands, some of which must be destroyed, some salvaged, and some shipped to the United States and her Allies.

On September 1 the Joint Chiefs of Staff instructed General MacArthur to bring to trial, before appropriate military tribunals, such Japanese war criminals "as have been or may be apprehended." Under this directive the military forces began rounding up Japanese leaders whom they believed guilty of bringing on the war or of condoning atrocities, and arranged for their trial.

LEROY WHITMAN.

YACHTING. Some of the salt of sailing experience was removed from the log of yacht racing last summer when a 17-year-old skipper from San Diego carried off top honors in the world Star Class championships, the most colorful event in the sport last year. Competing against the best skippers in his class, Malin Burnham, tow-headed high school boy, amassed 87 points in the series held off Stamford, Conn., to defeat James Cowie of the Pacific Coast fleet by a margin of only two points. Young Burnham clinched the title with a victory in the final race.

Other leading Star Class sailors during the year were Adrian Iselin 2d of Southern Long Island Sound, who won Atlantic Coast laurels with his Ace, and Horace Havemeyer, who took the Corry Trophy with the Gull. George R. Barnes of Skaneateles, N.Y., was national ruler of the Lightning Class, Joseph Bartlett of Margate City, N.J., was best of the Comet skippers and F. R. Ford led the Atlantics.

Champions of the Long Island Sound Y.R.A. were as follows: International, Cornelius Shields (Aileen); Class S, W. S. Chesley, Jr. (Auley); Atlantic, G. R. Hinman (Sagola); Star, W. P. O'Gorman (Wahim); Victory, R. W. Fraser (Black Jack); Handicap, Division V, S. E. Kay (Valkyrie); Handicap, Division VI, C. W. Reynolds (Decibel); Handicap, Division VII, C. J. Biensstock (Patricia); One-Ten, H. G. Herbert (Hurricane); Comet, W. E. Baltz (Blue Peter).

Larchmont Race Week, always among the leading attractions on the Sound, drew big fleets as did the majority of other regattas on 1945's log. A number of distance races came back in the wake of peace, the biggest of the season being the Riverside Yacht Club's overnight run around Stratford Shoal, with a record fleet of 69 going to the starting line for the 50-mile thrash. The Commodore

Pierce Trophy, major prize for the event, was won by E. L. Raymond's ketch, Chanteyman, as 20 of the craft finished.

Competition for big craft returned to England when fifteen yachts ranging from three to forty-two tons sailed in the first test held off Cowes since 1939. C. E. Donne's Content captured first place in the event. The most coveted trophy of Bahamas racing, the King George V Cup, was won by the veteran Oswald Mosley, who sailed his famous Pirate Class Corsair to triumph in the Royal Nassau Sailing Club series.

THOMAS V. HANEY.

YAP. An island cluster in the western Caroline group of the Japanese Pacific Islands (q.v.); surrendered by Japan to Allied armed forces in 1945. It comprises three main islands within a lagoon formed by an outer band of islets. Area, 83 square miles. Population (1938), 6,939 (5,811 natives, 1,119 Japanese, and 9 others).

YUGOSLAVIA. A Balkan republic (proclaimed Nov. 29, 1945, and recognized by Great Britain and the United States on Dec. 22, 1945), formerly a kingdom. Area: 95,753 square miles. Population (Jan. 1, 1941, estimate): 15,920,000 (13,934,000 at the 1931 census). Chief cities (with 1931 census figures): Belgrade (capital) 266,849, Zagreb 185,581, Subotica 100,058, Ljubljana 79,056, Sarajevo 78,173, Skopljje 64,737, Novi Sad 63,985.

Religion and Education. According to the 1931 census, members of the Serbian Orthodox Church comprised 48.7 percent of the total population, Roman Catholics 37.45, Moslems 11.2, Protestants 1.66, Jews 0.49, and Greek Catholics 0.32 percent. Education (1938-39): 1,474,224 students in elementary schools, 177,034 students in secondary schools, and 16,969 students in the universities.

Production. Agriculture, in normal times, was the occupation of 80 percent of the people, and about 80 percent of the cultivated area was devoted to cereals. (For statistics of production see YEAR BOOK for 1943, page 754). Minerals produced include coal, iron, copper, gold, lead, chrome, antimony, and cement. There were 3,054 industrial enterprises in 1938 and their employees numbered about 400,000 in 1940. Leading industries included timber, textiles, milling, tanning, cement, leather goods, chemicals, steel, brewing, and sugar refining.

Foreign Trade. The value of merchandise imports in 1940 was 6,019,000,000 dinars; exports, 6,680,400,000 dinars. For distribution and character of 1939 trade, see YEAR BOOK for 1940.

Finance. Budget expenditure authorized for the 1940-41 fiscal year (ended March 31) was 14,708,200,000 dinars, as against actual expenditures of 12,327,900,000 dinars in 1939-40. Public debt on Mar. 31, 1939, 24,620,000,000 dinars (internal, 12,620,000,000; external, 12,000,000,000). On Mar. 31, 1941, currency in circulation totaled 15,281 million dinars. The average exchange rate of the dinar was \$0.0227 in 1939, \$0.0225 in 1940.

Transportation. There were 6,591 miles of railway in 1939 (6,000 miles operated by the state). Highways extended 26,534 miles. The Danube and other rivers are important traffic arteries.

Government. The Constitution of Sept. 3, 1931, proclaimed Yugoslavia a hereditary, constitutional monarchy. It vested executive power in the King, acting through a Ministry appointed by him and not responsible to Parliament. Legislative power was shared by the King and Parliament. There was a Senate of 84 members, half elected and half appointed by the Crown for terms of six years. The

Lower Chamber (Skupština) of 371 elective members was dissolved Aug. 28, 1939, and new elections were held in November 1945. The Constituent Assembly meeting in Belgrade on Nov. 29, 1945, proclaimed Yugoslavia a republic. Premier: Marshal Josip Broz (Tito).

Events, 1945. Yugoslavia commenced 1945 with the Partisans in control of a strong military force, a vigorous de facto government at Belgrade, determined leadership, and the support of the Allies. Towards the end of the year the de facto government succeeded in carrying out national elections, whereby it constituted itself the legal government, which then proclaimed Yugoslavia a democracy and denounced the claims of King Peter and the House of Karageorgevich. At the end of 1944 an agreement had been reached by which Tito's Partisan regime and the King's government headed by Subasich would cooperate, with a Regency to act for the King. The King continued to act under the advice of influential Yugoslav circles outside the country who were hostile to the Partisan regime and also of certain British interests who were concerned with preserving the monarchy in Yugoslavia, and in January insisted that he himself appoint the Regents, or, alternatively, that a combined Tito-Subasich government hold the powers of the Regency. Prime Minister Churchill publicly admonished Peter not to delay the march of events, and Peter's obduracy was welcomed by the Partisans themselves on the ground that it damaged his cause. On January 29 Peter reappointed Subasich Prime Minister, though he had declared two days before that he had no confidence in him, but the Regency remained unsettled, Tito flatly rejecting Peter's candidates.

On February 4 and 5 the Partisan government in Belgrade issued a series of decrees which made it clear they intended to proceed with the legal and constitutional reorganization of Yugoslavia without reference to the state of their relations with the Government-in-exile. These decrees provided for the establishment of a National Supreme Court and the office of Attorney-General, but also, and more significantly, abrogated all laws and decrees which conflicted with those of the National Liberation Provisional Government. Negotiations for the implementation of the Tito-Subasich agreement of November 2, 1944, continued despite the King's obduracy, and on March 5 Regents acceptable to Tito were sworn in. On the following day both Dr. Subasich offered his resignation to the Regency Council and Tito offered the resignation of the National Committee of Liberation to the presidium of the Antifascist Council of National Liberation of Yugoslavia (AVNOJ). On March 7 the Provisional Government of Democratic Federative Yugoslavia, composed of members of the former Subasich Cabinet and of officials of the Partisan regime, was inaugurated in Belgrade. Tito became Prime Minister and Subasich Foreign Minister. Milan Grol, leader of the Democratic Party of Serbia, who had been rejected by Tito as Regent, was named one of two deputy Prime Ministers, and Yuray Shutey, previously considered to be personally and politically unacceptable to the Partisans, was made Minister without Portfolio. About two-thirds of the government of 26 was composed of non-Communists, but the important posts of Prime Minister and Minister of War were held by Tito, and the Communist leader Edvard Kardelj held the posts of Deputy Prime Minister and Minister for the Constituent Assembly. In a speech to the nation Tito declared that the Provisional Government would remain in office until the

completion of the duties of a constituent assembly, which would be elected by universal suffrage and secret ballot. It was not expected, and events proved, that the institution of the provisional government with the cooperation of ministers of the Government-in-exile would cause the Partisan administration to deviate from the plans which it was following and which had the approval of the Allies. Shortly after the formation of the provisional government, British Ambassador Stevenson, U.S. Ambassador Patterson, and U.S.S.R. Ambassador Sadchikov arrived in Belgrade; formal recognition by the powers was considered unnecessary, as the regime was inducted by a Regency council which represented a constitutional continuation of the previous regime.

During April the provisional governments of Yugoslavia's six federal units were crystallizing into permanent form. The principle of the central government was that each unit should have full autonomous rights but that no separatism would be brooked. In Serbia Dr. Blagoje Neshkovich (Communist) became Prime Minister of ASNOS (Antifascist Association of National Liberation of Serbia). At its first session on April 7 it was decided that the Sandjak be divided between Serbia and Montenegro, that Vojvodina be included with Serbia in a semi-autonomous status, and that Kosovo-Metohiya be joined to Serbia without qualification. In Croatia ZAVNOH (Regional Antifascist Council of National Liberation of Croatia) was formed at Split on April 14, with Dr. Vladimir Bakarich (Communist) as Prime Minister. For Macedonia Lazar Kulishevski (Communist) became Prime Minister of ASNOM (Antifascist Association of National Liberation of Macedonia) on April 15. On the same day the Antifascist Association of National Liberation of Montenegro and Boka elected a new presidium, which created a government with Dr. Blazho Yovanovich as Prime Minister. The National Government of Slovenia was formed at Aidovshchina in Venezia Giulia on May 5 by SNOS (Slovenian National Liberation Council), with Boris Kidrich (Communist) as Prime Minister. The new Government of Bosnia-Herzegovina was formed at Sarajevo on April 28 with Rodolyub Cholakovich (Communist) as Prime Minister.

During the spring, serious disputes with Britain arose over the occupation of Venezia Giulia and Carinthia. At the end of February Field Marshal Alexander, visiting Tito, reaffirmed that pre-1939 Venezia Giulia would be under the control of the Allied Military Government, but without prejudice to Yugoslavia's claims at the Peace Conference. On May 2, Lieut. Gen. Freyberg of the New Zealand 2nd Division accepted the surrender of the German garrison at Trieste. Yugoslav GHQ protested, saying that they had liberated the city and had announced their entry into it in a communiqué of April 30. The crisis spread to Carinthia when the British won the race to occupy the border areas of Klagenfurt, Villach, and Tarvisio (Trbrzh) on the pre-1939 Italo-Austrian border. General Yakshich, chief of staff of the Yugoslav Fourth Army, protested. The presence of anti-Russian Polish units in the British Eighth Army increased the irritation of the Yugoslavs, and it was also alleged that 20,000 men of the remnants of Mihailovich's forces had joined the British. Yugoslav troops along with New Zealanders were in Trieste, and Yugoslav propaganda was strongly in favor of keeping the city. Marshal Alexander was equally sharp. On May 19 he said publicly: "It is . . . Marshal Tito's apparent intention to

establish his claims by force of arms. Action of this kind would be all too reminiscent of Hitler, Mussolini, and Japan. It is to prevent such actions that we have been fighting this war." After additional mutual recriminations an agreement between Yugoslav and Anglo-American representatives concerning jurisdiction over and administration of Venezia Giulia was signed at Belgrade on June 9. Tito accepted almost in their entirety the terms of his earlier verbal agreement with Marshal Alexander, and the Yugoslav press glossed over the diplomatic defeat. In the months following, the press did criticize the Allied Military Government administration of Venezia Giulia as favoring the forces of reaction.

With Russia, as with Bulgaria and Albania, Yugoslav relations continued most cordial. When Greek territorial claims on the latter two countries grew strident Yugoslav propaganda joined theirs in denouncing the irresponsible "monarchofascist" regime in Greece, and in all such debates Yugoslavia, like the others, supported its patron Russia against Greece's patron Britain. After the inauguration of the Labor government in England and particularly after the installation of a more democratic regime in Greece at the end of November, tension in Yugoslav-Greek relations was relaxed. The spirit of cooperation among the non-Greek Balkan peoples, which was regarded as envisaging an ultimate Balkan federation under Russian patronage, is illustrated by the amicable cession of the Kosovo region, to which Albania had strong claims, to Yugoslavia, and by the cooperation of the two states in administering border regions. On April 5, Tito and an entourage of ministers was welcomed by high dignitaries at Moscow, and on April 13 a new and favorable trade agreement was signed with the U.S.S.R. The Yugoslav press attacked Turkey on the ground of its unfavorable attitude towards Russia. In March, after a long series of disagreements, an understanding was reached with UNRRA, and an agreement was signed. Subsequently it was charged that UNRRA supplies were being misused for political and military ends.

Meanwhile party politics continued, the main issue being the continued existence of parties other than Communist within the framework of the Provisional government. Soon after the formation of that government Milan Grol, first Deputy Prime Minister, started a campaign for the continued independent existence of the Democratic Party, and subsequently he was supported by Yuray Shutey, Minister without Portfolio, and others. With the defeat of Germany the Partisans no longer had to fear dissidents; Grol, Shutey, Kosanovich, Smodlaka, and Prodanovich petitioned Tito to proclaim amnesty and to take measures to appease the opposition. Instead a leader like Dr. Vlatko Machek, who before the war had headed the Croatian Peasant Party and whom the Partisans had heretofore appeased, was now virtually accused as a war criminal along with Nedich, Pavelich, and Mihailovich. Evidence brought out at trials of Mihailovich followers at the end of July established beyond doubt Mihailovich's "collaboration" with Germans, Italians, and with Nedich—claimed by his adherents to have been temporary and for proper ends. In regard to the old parties and their desire for independent existence and independent representation in elections, the position of the Partisans was that the prewar leaders had no real following and their programs no substance; they were anachronistic and obstructionist. Truer democracy could be achieved by making an "umbrella" party in which individual

parties could collaborate as components. To promote this view of democracy, Partisan propaganda during the summer attacked the theory and practices of the western type of democracy, and specifically the administration of Venezia Giulia. It was expected that Grol and his associates would precipitate a crisis during the summer by resigning from the government, but they continued in it, merely making known their protests.

On August 7 the Antifascist Council of National Liberation of Yugoslavia (AVNOJ) convened in Belgrade for the third time since its inception and changed its name to the Provisional National Assembly (Skupstina) of Yugoslavia. Before November, 1942, when AVNOJ met for the first time, the Supreme Command of the National Army of Liberation and Partisan Detachments of Yugoslavia was not only the highest military authority but also the central political forum and supreme governing body. With its establishment AVNOJ took over the political and governmental functions. At its second meeting in November, 1943, at Jajce AVNOJ proclaimed itself the highest legislative and executive body, while the newly founded United National Front (which did not receive nation-wide status until August, 1945) was established as a purely political forum. The third meeting of AVNOJ was convoked in order (a) to enlarge itself in accordance with the Yalta provisions; (b) to enact necessary laws for the election of a constituent assembly, provided for by the Tito-Subasich agreement; and (c) to promulgate a series of political, social, and economic laws concerning such matters as freedom of press, civil marriage, and agrarian reform. The assembly was enlarged by 118 new deputies so that its number was about 350. The electoral law gave suffrage to all citizens of both sexes except for specified categories of persons who actively collaborated with the fascists. Elections for the local assemblies would be direct and for higher administrative units indirect, through delegates designated by each lower unit. The law on the constituent assembly provided for a bicameral parliament, composed of a Federal Skupstina and National Skupstina. The former will have one deputy for each 40,000 inhabitants, the latter 25 deputies for each federal unit regardless of population, 15 from Voivodina and 10 from Kosovo-Metohiya. Both houses will enjoy equal rights and both must approve all laws. In case of disagreement delegates from both houses will form a coordination committee, and if this committee should fail to agree new elections would be called. The Skupstina is to meet only occasionally; when it is not in session it is to be represented by a joint presidium of both houses. The agrarian law provided for the expropriation of the holdings of absentee landlords, in several categories, and their distribution to the peasants who worked them. The special privileges granted by previous governments to foreign mining companies, especially that exploiting the Bor mines, were cancelled, but their investments were not expropriated.

Milan Grol, while continuing in the government, registered disapproval of its measures and techniques. The function of the new parliament, he held, was not to initiate new laws but merely to register measures promulgated by the forces dominating the regime. But Grol and his opposition were really without a program of their own, their objections being to the techniques rather than the actual measures of the government, and during the summer and autumn the opposition parties showed signs of rapid disintegration. The Partisan election campaign was based on assertions that

what the opposition really desired was a return of the prewar fascist regime and that the great preponderance of the people were heartily in favor of the Partisan government. These assertions became more vigorous after the opposition, including Foreign Minister Ivan Subasich, Yuray Shutey, and other Croat Peasant Party representatives in the government, decided not to participate in the elections, and after a conference of Catholic Bishops at Zagreb on September 20 issued a pastoral letter attacking the regime as undemocratic. The elections of November 11, in which the National Front's candidates were returned by a sweeping majority, were at least more democratic than any that had been held in Yugoslavia since 1929. The Front's victory was due not only to its organization, discipline, and clear-cut program but also to the disintegration of its opposition. Towards the end of their campaign the Partisans launched a vigorous attack upon King Peter, and the public airing of a financial quarrel between the King and his mother was an argument to prove the costliness and unworthiness of the monarchy.

On November 28 the Skupshtina declared Yugoslavia a democracy, and thus formally disowned any allegiance to Peter and the House of Karageorgevich. The step met with approval abroad, not only on the part of Russia but also of the western Allies. On December 22, while Secretary of State Byrnes and Foreign Secretary Bevin were meeting in Moscow with Foreign Commissar Molotov, the governments of the United States and Great Britain announced their recognition of Marshal Tito's government. Acting Secretary of State Dean Acheson made it clear that this recognition did not constitute a blanket endorsement of the policies of the Partisan regime, its methods of assuming control, or its failure to implement the guarantees of personal freedom promised the Yugoslav people. However, Acheson added, in a statement addressed to Richard Patterson, formerly ambassador to King Peter's government and now accredited to the new government: "You should make it quite clear to the authorities and people of Yugoslavia that we entertain only the friendliest sentiments towards the peoples of the country and that it is our anticipation that the evolution of events will provide developments which will make possible those relations—both political and economic—between the peoples of Yugoslavia and the United States which we on our part most urgently desire to see."

ZINC. Declining mine production and imports kept zinc in short supply in relation to demand in the first half of 1945, and not until conclusion of the war with Japan was it possible to completely remove distribution and use controls.

Only through the hypodermic of the Government's premium price plan, by which mines received additional payments for extracting otherwise unprofitable ores, was domestic production bolstered to 615,927 net tons (1944: 718,642 net tons). With the plan in operation, an average price of 11.5 cents per lb. was received by producers compared to a ceiling market price of 8.25 cents per lb. and a 1939 average price of 5.12 cents per lb. If the premium price expires as scheduled June 30, 1946, much of the production of the Tri-State District (Missouri-Kansas-Oklahoma), which contributes about one-quarter of domestic supply, may be lost because of approaching exhaustion of richer grades of ore. Increased dependence will then be placed on imports, mostly in the form of ores and concentrates smelted in the United States.

Total domestic production of slab zinc, nearly all consumed in the United States, was estimated at 813,700 net tons, including primary production from both foreign and domestic ores and redistilled secondary metal. Approximately half the imports came from Mexico with large amounts from Canada and Chile. Government stocks at the end of the year were about 260,000 tons, the highest in history.

A sharp rise in the ammunition program early in the year brought requirements for brass mill products (about 30 percent zinc) to a new peak, making it necessary to put zinc back under allocation effective April 1. Although use restrictions were relaxed in May and revoked in June, brass mill requirements were still high after the end of the European war, and further distribution restrictions were invoked effective August 1. Full removal of controls came August 20. The sharp drop in brass mill consumption in the latter part of the year made galvanizing the principal use of zinc during the year by a small margin. Although these two uses accounted for over two thirds of total consumption, use of zinc for die casting was rapidly regaining its growing prewar importance as reconversion progressed.

CHARLES T. POST.

ZOOLOGY, 1942-45. During the period 1942-45, zoological activity was necessarily limited by the exigency of total war. Wherever possible, however, experiment and study continued, and considerable information, some entirely new, was recorded.

Ecology. Insects are frequently carried considerable distances in the upper air. Wellington (*Canadian Entom.*, 77, pp. 7, 21) studied experimentally the conditions governing such methods of distribution and the tolerances insects have to pressure and cold. The life history of the lugworm (*Arenicola*) of Europe and its burrows in the sand are described by Wells (*Jour. Marine Biol. Assoc. United Kingdom*, 26, p. 170).

In *The Biotic Provinces of North America* by L. R. Dice (Univ. Michigan Press, 1944), North America is divided into some 30 biological provinces, continuous geographic areas which are characterized by one or more important ecological associations. The provinces are subdivided into districts, and these again into life belts which are often discontinuous, vertical divisions.

The distribution of fresh water mussels in streams is shown by Van der Schalie (*Pap. Michigan Acad. Sci. Art. Lett.*, 30, p. 355) to offer evidence of former stream confluences.

A number of wildlife workers have cooperated in a booklet (*Missouri Conserv. Comm. Circ.*, 134) in which the thesis is developed that fertility of the soil is an important factor in animal ecology. A wide range in the weights of individual animals from different soil areas is noted, the largest and heaviest coming from fertile soils, in addition to the larger populations supported by these areas.

Leopold (*Wisconsin Conserv. Bull.*, 8, no. 8, p. 3) concludes that the removal of predatory species may pave the way for serious irruptions of deer populations. Killing of males only rarely checks the increase of polygamous species, and an open season on does may be necessary.

Zoogeography. Mayr (*Quart. Rev. Biol.*, 19, p. 1) discussed Wallace's Line in the light of recent studies. Weber's Line, running between the Moluccas and Celebes, Australia and Timor, represents a better division of the Australian and Oriental faunas.

Behavior. The way the world appears to the

fishes, birds, and mammals, different as it is to our human impressions, is the theme of *The Nature of the Beast* (Doubleday, Doran and Co., 1945) by Ruth Crosby Noble. The reader may, in this popular account, become acquainted with modern experimental investigations of animal behavior.

Echolocation, the finding of one's way by hearing of echoes from solid objects, somewhat on the principle used in radar, Griffin shows is a method used by the bats and by blind men (*Science*, 100, p. 589).

Much new information on the behavior of Rocky Mountain sheep was reported by Spencer (*Jour. Mammal.*, 24, p. 1), based on the study of a Colorado herd. The rams do not assemble a harem but are promiscuous, moving from flock to flock of ewes. Battling does not drive away rivals but establishes a sort of "priority" and social dominance among the rams.

Genetics. Asmundson (*Genetics*, 30, p. 305) found at least ten genetic factors involved in the inheritance of color in turkeys. In the fox, coat color is commonly controlled by two factors, according to Butler (*Genetics*, 30, p. 39); red color is based on the presence of all four dominant genes; smoky red foxes are heterozygous in one set of factors; cross foxes in both.

Anatomy. Hill (*Jour. Mammal.*, 26, p. 153) was fortunate enough to secure a male and female dugong and was able to investigate a number of anatomical features, previously poorly known. The heart is bifid; the brain poorly developed; the uterus is double except for a short body; and there are two caeca. Robertson (*Zoologica*, 29, p. 169) described the anatomy of the forelimb of the woolly monkey, part of a study he is making on this New World monkey.

Embryology. The history of man before birth is one in which people have great interest and yet great ignorance. "Ourselves Unborn" by Corner (*Yale University*, 1944) gives an up-to-date summary of human embryology, excellently illustrated, readable, and understandable.

The length of gestation in weasels and their relatives was discussed by Pearson and Enders (*Jour. Exper. Biol.*, 95, p. 21). In those which carry their young over the winter (badger, weasel, marten, and fisher), the embryos remain in resting condition. Implantation in the spring is thought to be correlated with increasing length of daylight.

Conservation. One of the essential steps in the conservation of wild life has been the setting aside of refuges, areas in which threatened species may reproduce, protected from their most dangerous enemy, man. Gabrielson's *Wildlife Refuges* (The Macmillan Co., 1943) gives a full-length review of these areas in North America and the results attained by them.

Evolution. The speed at which evolution takes place in nature is fully discussed in Simpson's *Tempo and Mode in Evolution* (Columbia Univ. Press, 1945), as is also the genetical adaptational aspects. Paleontology is found to have essential agreement with modern genetics regarding the causes of evolution. *Systematics and the Origin of Species* by Mayr (Columbia Univ. Press, 1942) gives the viewpoint of a zoologist on the causes of evolution. A wealth of examples is drawn from many fields, chiefly ornithology. Modern systematics are correlated with ecological and genetical evidences in an extremely valuable manner.

Recapitulation is discussed by Holmes (*Quart. Rev. Biol.*, 19, p. 319), who suggests possible causes.

Taxonomy. An extremely valuable review of tax-

onomy is given by Simpson (*Bull. Amer. Mus. Nat. Hist.*, 85), together with a new classification of mammals, living and extinct. A set of principles to be used in the naming of higher categories is proposed.

Paleontology. Certain strange, eight-rayed imprints in the sandstone of the Yellowstone Valley, Montana, were reported by Brown and Vokes (*Amer. Jour. Sci.*, 242, p. 656). They seem to have been the marks of ancient cephalopods, resting head-down on the muddy bottom of a shallow sea.

Skulls of mammal-like reptiles have been studied by Olson (*Geol. Soc. America, Spec. Papers*, 55), who considers that three distinct lines developed in the mammalian direction.

Insects. *The Insects of the Pacific World* by C. H. Curran (The Macmillan Co., 1945) presents a review of the insects and spiders occurring on the Pacific Islands, in non-technical language. There are some 50,000 species of insects in this area; this book does not attempt to describe each but instead deals with family groups.

Comstock (*N. Y. Acad. Sci., Scient. Surv. Porto Rico and Virgin Is.*, 12, no. 4, p. 421) describes the swallow-tail butterflies and the skippers on the West Indian islands under American rule. This completes the work on Lepidoptera in this series.

Ewing and Fox (*U. S. Dept. Agric., Misc. Publ.*, 500) give keys to the genera and higher groups of the fleas of North America, descriptions of the various forms, their ranges and hosts.

Protochordata. The American ascidians—distant relatives of the vertebrates that as adults commonly resemble sponges—were reviewed by Van Name (*Bull. Amer. Mus. Nat. Hist.*, 84).

Fishes. Another blind characin fish has been described by Breder (*Zoologica*, 29, p. 131), found in San Luis Potosi, Mexico. The retinal tissue and optic nerve of this cave fish are completely gone, and it is indifferent to light.

The osteology and relationships of *Luvarus*, a rare scombroid fish, are discussed by Gregory and Conrad (*Bull. Amer. Mus. Nat. Hist.*, 81, p. 225). The body of this species is strengthened by dorsal and ventral bony trusses which function like accessory vertebral columns.

Amphibians and Reptiles. Fossil reptiles and amphibians are described in popular, yet accurate style in Colbert's *The Dinosaur Book* (Amer. Mus. Nat. Hist., 1945). Among the more peculiar is the champion "bonehead," an aquatic species with a dense skull ten inches thick above its brain which is hardly larger than a man's thumb.

Reptiles of the Pacific World (The Macmillan Co., 1945) gives an account of the turtles, crocodiles, lizards, snakes, frogs, and toads of the Pacific Islands, by A. Loveridge. Special treatment is given to the poisonous snakes.

Birds. Experimental evidence has recently been reported by Dice (*Amer. Nat.*, 79, p. 385), showing that several common owls see objects in light one-tenth to one-hundredth of that required by man. The diurnal burrowing owl, however, sees poorly in the dark.

Delacour and Mayr (*Wilson Bull.*, 57, p. 4) revised the family Anatidae, the ducks, geese, and swans. The taxonomy, behavior, ecology, variation, and evolutionary significance of the Galapagos finches was reported by Lack (*Occ. Pap. Calif. Acad. Sci.*, 21). These birds, first studied by Darwin, influenced his thinking on evolution.

Mayr (*Bull. Amer. Mus. Nat. Hist.*, 83, p. 123) gave an account of the birds of Timor and Sumba in the Netherlands Indies, including a zoogeographical analysis of the Sunda Islands. A more

general account, by the same author, *Birds of the Southwest Pacific* (The Macmillan Co., 1944) gives brief descriptions of the birds to be encountered between Samoa and the Marianas. A section is devoted to the bird life of the various islands.

The winter home of the chimney swift, long unknown, was discovered when Peruvian Indians killed some swifts wearing leg bands and sent these to the American Embassy at Lima, from whence they were forwarded to the Fish and Wildlife Service (*Auk*, 61, p. 604).

Mammals. Wimsatt (*Jour. Mammal.*, 26, p. 23) gives evidence that in the little brown bat (*Myotis lucifugus*) gestation is only 50 to 60 days. Since this species and many other northern bats breed in the autumn and give birth in the early summer, the period of gestation has been thought much longer than this. In the same periodical (p. 86) Kendeigh gives for the first time the body temperature of several small rodents and shrews. It averaged about 38° C. in deer-mice and chipmunks, and near 36.5° C. in the shrews.

Carter, Hill and Tate in *Mammals of the Pacific World* (The Macmillan Co., 1945) gave a non-technical review of the mammals of this area. Also included are the ways animals reached the islands in spite of sea barriers.

New observations were made on the breeding and life history of the Australian duckbill. Fleay (*Animal Kingdom*, 47, p. 51) reports nest-building and the development of a young platypus.

Kalmbach discovered that an armadillo may float in water by gulping air and inflating its stomach and intestines. For short distances this animal may walk under water (*The Armadillo . . .*, Texas Game, Fish and Oyster Comm., 1944).

Field studies of wolves in Mount McKinley National Park, Alaska, are recorded by Murie (*National Parks of U. S., Fauna Series No. 5*). The wolf family has a definite home range and does not tolerate strange wolves. Even bears are driven from near the den. Little injury was done by wolves to the Dall sheep of the Park and, in spite of heavy predation, great numbers of caribou live in the area. Covering a much wider scope, Young and Goldman, in *The Wolves of North America* (American Wildlife Institute, 1944) give information on

classification and control, as well as life history of these beasts.

Jordan's short *Natural History and Behavior of the Western Chipmunk and Mantled Ground Squirrel* (Oregon State College, 1944) contain many suggestive experiments that may be widely used to test the skills and intelligence of wild animals.

The mammals of South American countries have been inadequately known, but those of Chile are described by Osgood (*Zool. Ser., Field Mus. Nat. Hist.*, 30) in considerable detail. Although a technical paper, it will provide the general reader interested in mammals with much information in this field.

The Mammals of Eastern United States (Comstock Publ. Co., 1943) by W. J. Hamilton, gives short descriptions and life histories of these, valuable to students and laymen alike.

The well-known poisonous effect of polar bear liver, also that of certain seals, is probably due to excessive quantities of vitamin A, according to Rodahl and Moore (*Biochem. Jour.*, 37, p. 166).

In ancient times the bite of a shrew was considered poisonous. Pearson (*Jour. Mammal.*, 23, p. 159) showed that in fact the saliva of the short-tailed shrew, *Blarina*, contains a toxic substance.

Elton in *Voles, mice and lemmings* (Oxford Univ. Press, 1942) gives a summary of all the available information on the plagues of these animals that may do great damage to crops. Cycles of increase and decrease in other animals are also discussed.

Prairies in western Washington are covered with rounded mounds 10 to 40 feet in diameter and up to 7 feet high, causing the prairies to appear from the air as if they had smallpox. Dalquest and Scheffer (*Jour. Geol.*, 50, p. 68) show that these are *Mima* mounds, the work of pocket gophers (*Thomomys*) over long periods of time. Beavers modify the earth's surface in another way, as reported by Ives (*Jour. Geomorph.*, 5, p. 191). The dams these animals construct gradually fill up with silt, forming meadows in the mountain country. In places, as much as one-tenth of the country is flat meadowland built up in this fashion.

JOHN ERIC HILL.

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Compiled by CHARLES DECKER

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